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Volume II

(P)
B.S.

LEVEL

FASTENER HOLE QUALITY

STRUCTURES DESIGN DEPARTMENT
GENERAL DYNAMICS FORT WORTH DIVISION
FORT WORTH, TEXAS 76101



DECEMBER 1978

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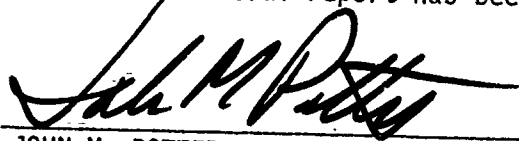
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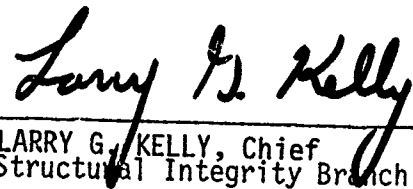
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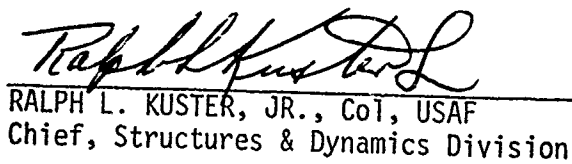


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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Equivalent Initial flaw size, fastener hole quality, clearance fit, transition fit, F-16 randomized spectrum, B-1 spectrum, axial scratch, mis- match, localized yielding, improved drilling, improved assembly. (Equivalent Initial Flaw Size)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) → This report describes the development of the EIFS concept as a potential design tool and the generation of EIFS data as a function of several manufactur- ing and design variables. Several factors or mechanisms that strongly affected the fatigue behavior of fastener holes have been identified and corrected to achieve a 100% improvement in fatigue life. Some of these improvements are being implemented in the F-16 production program and the improved drilling will be implemented in the C5A-H Mod. Program. ←		

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I INTRODUCTION

During the performance of Air Force Flight Dynamics Laboratory Contract F33615-76-C-3113 approximately 600 coupon fatigue specimens, both no-load and low-load transfer, were manufactured, fatigue tested and fatigue cracks fractographically read. This document contains the individual fatigue test data sheets and equivalent initial flaw size values which were the result of analyses subsequently performed. Also included are listings of crack depths at one-half life intervals for most specimens.

Section I is made up of "Fatigue Test Data" sheets which contain all pertinent information e.g., time of test termination or time to failure, to facilitate fatigue testing and fractographic analysis. All data are grouped by task and individual specimen designations are deciphered in Table 1-1. Miscellaneous notes are also included in the data sheets.

Equivalent initial flaw size and crack depth values, at one-half life intervals, are found in Section II listed by task. These listings are computer generated in a manner described in Volume I. All EIFS and crack depth values are ranked in ascending order and listed with their corresponding cumulative probabilities.

It should be noted that no equivalent initial flaw size values are listed for holes filled with Taper-lok fasteners. Insufficient crack growth in these specimens precluded fractography, except for final crack depth values in some cases, thus making EIFS values unattainable.

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TABLE 1-1 SPECIMEN DESIGNATIONS WITH SPECIFIC MANUFACTURING AND TEST CONDITIONS

TASK	SPECIMEN DESIGNATION	LOAD TRANSFER %		HOLE PRODUCTION TECHNIQUE						SPECTRA		COMMENTS
				CLEARANCE-FIT DRILLED		TRANSITION-FIT DRILLED/REAMED				FIGHTER	BOMBER	
		0	15	PROPER	IMPROPER	IMPROVED	PROPER	IMPROPER				
I	WPF	X		X						X		
	WIF	X								X		
	WPB	X		X							X	
	WIB	X									X	
	QPF	X					X			X		
	QIF	X								X		
	QPB	X					X				X	
	QIB	X										
	ZWPF	X				X				X		
II	XWPF		X	X						X		
	XWPB		X	X							X	
	XQPF		X				X			X		
	XQPB		X				X				X	
III	YWPF		X					X			X	
	YWPB		X					X				40.8 ksi
	HYWPF		X					X			X	40.8 ksi
	HYWPB		X					X				30.6 ksi
	LYWPF		X					X			X	30.6 ksi
	LYWPB		X					X				
	XWIF		X		X					X		
	VMWF		X									**
IV	ST	X							X			
	TYPE	X							X			
V	CW	X		*						X		*NA
	TL	X		*						X		*NA

**V = Improved Drilling/Assembly

KEY TO SPECIMEN DESIGNATIONS:

W - Winslow Drilled
Q - Quackenbush Drilled/Reamed
P - Proper Techniques
I - Improper Techniques

CW - Cold-Worked Holes
TL - Taper Loked Holes
F - Fighter Spectra
B - Bomber Spectra

H - High Stress Level
L - Low Stress Level
ST - AF 1410 Steel
TY - Titanium

40.8 ksi
40.8 ksi
30.6 ksi
30.6 ksi

**

*NA
*NA

II FRACTOGRAPHIC DATA SHEETS

2.1 TASK 1
2.1.1 WPF
FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-6
SPECTRUM: Fighter
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.5019
AVERAGE THICKNESS: .3786
AREA: .5686
BASELINE STRESS: 34ksi
MAX. LOAD: 19333.1
CYCLES AT TERMINATION/FAILURE: _____
2 Lives/1,531,494 L.P.

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-7
SPECTRUM: Fighter
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.5027
AVERAGE THICKNESS: .3781
AREA: .5682
BASELINE STRESS: 34ksi
MAX. LOAD: 19,317.8#
CYCLES AT TERMINATION/FAILURE: *

2 Lives/
@ 1,417,246 L.P. ~ 14,806.42 FLT-HRS *

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0954	
39	15600	.0863	
38	15200	.0764	
37	14800	.0687	
36	14400	.0617	
35	14000	.0555	
34	13600	.0502	
33	13200	.0457	
32	12800	.0407	
31	12400	.0362	
30	12000	.0336	
29	11600	.0297	
28	11200	.0269	
27	10800	.0243	
26	10400	.0215	
25	10000	.0188	
24	9600	.0162	
23	9200	.0142	
22	8800	.0125	
21	8400	.0109	
20	8000	.0097	
19	7600	.0085	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200	.35627	.00057
37	14800	.35910	.10020
36	14400	.25930	.07794
35	14000	.17756	.02703
34	13600	.15053	.02001
33	13200	.13052	.01825
32	12800	.11227	.01603
31	12400	.09624	.01460
30	12000	.08164	.01217
29	11600	.06947	.01035
28	11200	.05912	.00808
27	10800	.05104	.00667
26	10400	.04437	.00587
25	10000	.03850	.00500
24	9600	.03350	.00484
23	9200	.02866	.00479
22	8800	.02387	.00357
21	8400	.02030	.00395
20	8000	.01635	.00319
19	7600	.01322	.00210
18	7200	.01104	.00128
17	6800	.00976	.00129
16	6400	.00897	.00152
15	6000	.00695	.00120
14	5600	.00575	.00119
13	5200	.00456	.00107
12	4800	.00344	.00080
11	4400	.00269	.00056
10	4000	.00213	.00053
9	3600	.00160	.00053
8	3200	.00117	.00043
7	2800	.00074	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACIOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-8
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5
 AVERAGE WIDTH: 1.5015
 AVERAGE THICKNESS: .3773
 AREA: .5665
 BASELINE STRESS: 34 ksi
 MAX. LOAD: 19,261.5
 CYCLES AT TERMINATION/FAILURE:
 2 Lives/ 1,531,494 L.P.

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0724	
39	15600	.0655	
38	15200	.0600	
37	14800	.0548	
36	14400	.0500	
35	14000	.0456	
34	13600	.0415	
33	13200	.0372	
32	12800	.0350	
31	12400	.0327	
30	12000	.0296	
29	11600	.0267	
28	11200	.0243	
27	10800	.0223	
26	10400	.0200	
25	10000	.0178	
24	9600	.0160	
23	9200	.0143	
22	8800	.0129	
21	8400	.0113	
20	8000	.0101	
19	7600	.0088	
18	7200	.0075	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-9
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: ① 2 3 4 5
 AVERAGE WIDTH: 1.5014
 AVERAGE THICKNESS: .3756
 AREA: .5639
 BASELINE STRESS: 34 ksi
 MAX. LOAD: 19,173.5 #
 CYCLES AT TERMINATION/FAILURE:
 2 Lives/ 1,531,494 L.P.

2 Lives
 $\%a = .19$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0702 / .3646	.0054
39	15600	.0648	.0042
38	15200	.0606	.0036
37	14800	.0570	.0039
36	14400	.0531	.0039
35	14000	.0492	.0031
34	13600	.0461	.0032
33	13200	.0429	.0033
32	12800	.0396	.0024
31	12400	.0372	.0027
30	12000	.0345	.0028
29	11600	.0317	.0027
28	11200	.0290	.0023
27	10800	.0267	.0022
26	10400	.0245	.0023
25	10000	.0222	.0020
24	9600	.0202	.0017
23	9200	.0185	.0017
22	8800	.0168	.0015
21	8400	.0153	.0013
20	8000	.0140	.0015
19	7600	.0125	.0015
18	7200	.0110	.0012
17	6800	.0098	.0011
16	6400	.0087	.0012
15	6000	.0075	.0010
14	5600	.0065	.0009
13	5200	.0056	.0009
12	4800	.0047	.0008
11	4400	.0039	.0007
10	4000	.0030	.0007
9	3600	.0023	.0003
8	3200	.0020 / .0020	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

$\%a = .29$ →

(2)

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5

VERAGE WIDTH: 1.5082

VERAGE THICKNESS: .3748

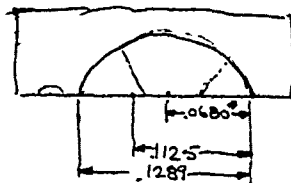
REA: .5609

ASELINE STRESS: 34 KSI

AX. LOAD: 19,070.6 #

YCLES AT TERMINATION/FAILURE: _____

Static load - 32 K# 2 Lives/ _____



SPECIMEN NUMBER: WPF-11

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 (4) 5

VERAGE WIDTH: 1.5013

VERAGE THICKNESS: .3732

REA: .5603

ASELINE STRESS: 33 KSI

AX. LOAD: 19,049.7 #

YCLES AT 15,206.36 / FAILURE: @ 1,455,528 L.P.C.

2 Lives/ _____

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0410 / .1289	.0040
39	15600	.0370	.0025
38	15200	.0345	.0023
37	14800	.0322	.0022
36	14400	.0300	.0022
35	14000	.0277	.0023
34	13600	.0255	.0018
33	13200	.0237	.0017
32	12800	.0220	.0020
31	12400	.0200	.0017
30	12000	.0182	.0016
29	11600	.0166	.0015
28	11200	.0151	.0013
27	10800	.0138	.0015
26	10400	.0123	.0012
25	10000	.0111	.0013
24	9600	.0098	.0014
23	9200	.0082	.0011
22	8800	.0071	.0010
21	8400	.0061	.0010
20	8000	.0051	.0011
19	7600	.0040	.0008
18	7200	.0032	.0006
17	6800	.0024	.0006
16	6400	.0020 / .0068	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		
40	16000		
39		.3500	.0601
38	15200	.2929	.0359
37	14800	.2570	.0257
36	14400	.2313	.0225
35	14000	.2088	.0200
34	13600	.1888	.0180
33	13200	.1708	.0160
32	12800	.1548	.0146
31	12400	.1402	.0131
30	12000	.1271	.0123
29	11600	.1148	.0112
28	11200	.1036	.0102
27	10800	.0934	.0096
26	10400	.0838	.0086
25	10000	.0752	.0071
24	9600	.0681	.0064
23	9200	.0617	.0060
22	8800	.0567	.0050
21	8400	.0467	.0051
20	8000	.0416	.0039
19	7600	.0382	.0032
18	7200	.0350	.0032
17	6800	.0318	.0030
16	6400	.0288	.0032
15	6000	.0256	.0034
14	5600	.0222	.0027
13	5200	.0195	.0031
12	4800	.0164	.0032
11	4400	.0132	.0034
10	4000	.0098	.0027
9	3600	.0071	.0020
8	3200	.0051	.0016
7	2800	.0035	.0010
6	2400	.0025	.0008
5	2000	.0017	.0005
4	1600	.0012	.0004
3	1200	.0008	.0003
2	800	.0005	
1	400		

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-12
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: ① 2 3 4 5
 VERAGE WIDTH: 1.5027
 VERAGE THICKNESS: .3786
 REA: .5689
 BASELINE STRESS: 34ksi
 AX. LOAD: 19,342.6
 CYCLES AT TERMINATION/FRACTURE:
 2 Lives/1531494 L.P.'s

2 Lives

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0485	
39	15600	.0470	
38	15200	.0394	
37	14800	.0361	
36	14400	.0325	
35	14000	.0287	
34	13600	.0261	
33	13200	.0233	
32	12800	.0206	
31	12400	.0182	
30	12000	.0160	
29	11600	.0140	
28	11200	.0122	
27	10800	.0108	
26	10400	.0093	
25	10000	.0085	
24	9600	.0075	
23	9200	.0064	
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

PREVIOUS TEST DATA

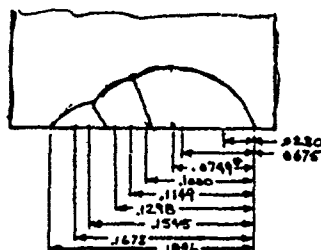
SPECIMEN NUMBER: WPF-13
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 ③ 4 5
 VERAGE WIDTH: 1.5018
 VERAGE THICKNESS: .3734
 REA: .5607
 BASELINE STRESS: 34ksi
 AX. LOAD: 19,063.8 #
 CYCLES AT TERMINATION/FRACTURE:
 2 Lives/
 STATIC LOAD - 30.8 K#

2 Lives
 $\%a = .24$

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0452 / .0396	.0046
39	15600	.0406	.0022
38	15200	.0374	.0026
37	14800	.0348	.0028
36	14400	.0320	.0029
35	14000	.0291	.0026
34	13600	.0265	.0023
33	13200	.0242	.0022
32	12800	.0220	.0021
31	12400	.0199	.0019
30	12000	.0180	.0015
29	11600	.0165	.0015
28	11200	.0150	.0017
27	10800	.0133	.0013
26	10400	.0120	.0015
25	10000	.0105	.0013
24	9600	.0092	.0010
23	9200	.0082	.0009
22	8800	.0073	.0009
21	8400	.0064	.0007
20	8000	.0057	.0007
19	7600	.0049	.0006
18	7200	.0043	.0006
17	6800	.0039	.0006
16	6400	.0033	.0005
15	6000	.0028	.0003
14	5600	.0025	.0004
13	5200	.0021 / .0045	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

$\%a = .47$



FRAC TOG R A P H I C D A T A

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-14
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 ② 3 4 5
 AVERAGE WIDTH: 1.5000
 AVERAGE THICKNESS: .3733
 AREA: .5599
 BASELINE STRESS: 34 Ksi
 MAX. LOAD: 19,036.6 #
 CYCLES AT TERMINATION/FAILURE:

2 Lives / 1,531,494 L.R.

$\%a = .15$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.444 / .1407	0.027
39	15600	0.417	0.022
38	15200	0.385	0.028
37	14800	0.357	0.024
36	14400	0.333	0.020
35	14000	0.313	0.024
34	13600	0.289	0.017
33	13200	0.272	0.019
32	12800	0.253	0.013
31	12400	0.240	0.016
30	12000	0.224	0.019
29	11600	0.205	0.018
28	11200	0.187	0.017
27	10800		0.017
26	10400	0.153	0.015
25	10000	0.138	0.013
24	9600	0.125	0.013
23	9200	0.112	0.012
22	8800	0.100	0.012
21	8400	0.088	0.010
20	8000	0.078	0.012
19	7600	0.066	0.009
18	7200	0.057	0.010
17	6800	0.047	0.008
16	6400	0.039	0.006
15	6000	0.033	0.006
14	5600	0.027	0.004
13	5200	0.023	0.002
12	4800	0.021 / 0.017	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2 Lives

$\%a = .43$

SPECIMEN NUMBER: WPF-15
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 ③ 4 5
 AVERAGE WIDTH: 1.5018
 AVERAGE THICKNESS: .3744
 AREA: .5622
 BASELINE STRESS: 34 Ksi
 MAX. LOAD: 19,114.8 #
 CYCLES AT TERMINATION/FAILURE:

2 Lives / _____

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.061	0.0143
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-16

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.5010

AVERAGE THICKNESS: .3749

AREA: .5627

BASELINE STRESS: 34 KSI

MAX. LOAD: 19,131.8 #

CYCLES AT TERMINATION/FAILURE:
2 Lives/

2 Lives
 $\sigma/\sigma_c = .30$

1 Life

$\sigma/\sigma_c = .03$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0688	.2296
39	15600	0650	0035
38	15200	0615	0033
37	14800	0582	0040
36	14400	0542	0032
35	14000	0510	0030
34	13600	0480	0031
33	13200	0449	0029
32	12800	0420	0026
31	12400	0394	0023
30	12000	0371	0022
29	11600	0349	0023
28	11200	0326	0018
27	10800	0308	0019
26	10400	0289	0021
25	10000	0268	0020
24	9600	0249	0019
23	9200	0229	0020
22	8800	0209	0017
21	8400	0192	0015
20	8000	0177	0019
19	7600	0158	0017
18	7200	0141	0016
17	6800	0125	0016
16	6400	0109	0014
15	6000	0095	0015
14	5600	0080	0013
13	5200	0067	0016
12	4800	0051	0013
11	4400	0038	0009
10	4000	0029	0007
9	3600	0022	.075
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-17

SPECTRUM: Fighter

TEST DATE: 1

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.5001

AVERAGE THICKNESS: .3747

REA: .5620

BASELINE STRESS: 34 KSI

MAX. LOAD: 19,108.0 #

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/

2 Lives

*

$\sigma/\sigma_c = .25$

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000	.01323	20 = .05195
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

@ 1,113,701 L.P.'s = 11,635,18 FLT-HRS.*

SPECIMEN FAILURE WAS DUE TO AN
 ELECTRICAL ERROR WHICH RESULTED
 IN A 100% COMPRESSIVE LOAD

16

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-18

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

AVERAGE WIDTH: 1.5017

AVERAGE THICKNESS: .3760

AREA: .5646

BASILINE STRESS: 34 ksi

MAX. LOAD: 19,196.4 #

CYCLES AT TERMINATION/FAILURE: _____

2 Lives / 1,531,494 L.P.s

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0485 / .1711 (.1497)	.0036
39	15600	.0449	.0031
38	15200	.0418	.0031
37	14800	.0387	.0025
36	14400	.0362	.0023
35	14000	.0339	.0026
34	13600	.0313	.0023
33	13200	.0290	.0022
32	12800	.0268	.0020
31	12400	.0248	.0018
30	12000	.0230	.0020
29	11600	.0210	.0016
28	11200	.0194	.0017
27	10800	.0177	.0017
26	10400	.0160	.0015
25	10000	.0145	.0013
24	9600	.0132	.0014
23	9200	.0118	.0014
22	8800	.0104	.0012
21	8400	.0092	.0011
20	8000	.0081	.0009
19	7600	.0072	.0007
18	7200	.0065	.0005
17	6800	.0060	.0007
16	6400	.0053	.0006
15	6000	.0047	.0007
14	5600	.0040	.0004
13	5200	.0036	.0004
12	4800	.0032	.0004
11	4400	.0028	.0003
10	4000	.0025 / .0052	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

$\%c = .48$

SPECIMEN NUMBER: WPF-19

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

AVERAGE WIDTH: 1.5017

AVERAGE THICKNESS: .3741

AREA: .5617

BASILINE STRESS: 34 ksi

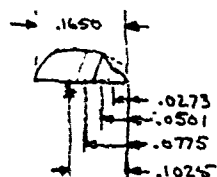
MAX. LOAD: 19,097.8

CYCLES AT TERMINATION/FAILURE: _____

2 Lives / 1,531,494 L.P.s

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0936 / .1650	.0042
39	15600	.0893	.0033
38	15200	.0860	.0028
37	14800	.0832	.0023
36	14400	.0809	.0025
35	14000	.0784	.0022
34	13600	.0762	.0023
33	13200	.0739	.0023
32	12800	.0714	.0021
31	12400	.0693	.0016
30	12000	.0677	.0018
29	11600	.0659	.0014
28	11200	.0645	.0019
27	10800	.0626	.0016
26	10400	.0610	.0017
25	10000	.0593	.0010
24	9600	.0583	.0010
23	9200	.0573	.0009
22	8800	.0564	.0007
21	8400	.0557	.0007
20	8000	.0550	.0005
19	7600	.0545	.0004
18	7200	.0539	.0004
17	6800	.0535	.0003
16	6400	.0532	.0004
15	6000	.0528	.0004
14	5600	.0524 / .0072	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

$\%c = .33$



FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-20

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

AVERAGE WIDTH: 1.5004

AVERAGE THICKNESS: .3735

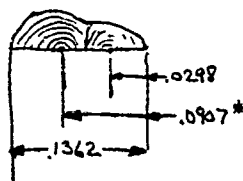
AREA: .5603

BASELINE STRESS: 34ksi

MAX. LOAD: 19,050.2#

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____



2 Lives
 $\%c = .21$

1 Life

$\%c = .40$

Blk #	FLIGHT HRS.	CRACK LENGTH IN*	INCREMENT IN.
40	16000	0290 / .1362	0024
39	15600	0266	0024
38	15200	0242	0025
37	14800	0217	0024
36	14400	0193	0025
35	14000	0178	0019
34	13600	0159	0016
33	13200	0143	0015
32	12800	0128	0014
31	12400	0114	0015
30	12000	0099	0014
29	11600	0085	0012
28	11200	0073	0010
27	10800	0063	0009
26	10400	0055	0007
25	10000	0048	0009
24	9600	0039	0005
23	9200	0034	0004
22	8800	0030	0005
21	8400	0025	0003
20	8000	0022	0003
19	7600	0019 / 0047	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-21

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.5017

AVERAGE THICKNESS: .3756

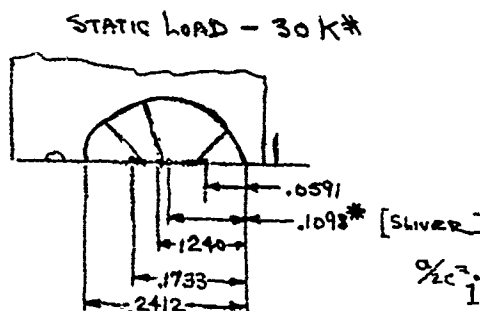
REA: .5640

BASELINE STRESS: 34ksi

MAX. LOAD: 19,176.0#

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____



2 Lives
 $\%c = .35$

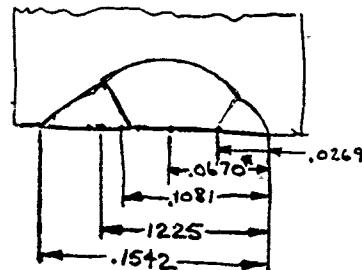
1 Life

$\%c = .31$
12

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0345 / .2412	0076
39	15600	0769	0062
38	15200	0707	0053
37	14800	0654	0050
36	14400	0604	0043
35	14000	0561	0043
34	13600	0518	0046
33	13200	0478	0035
32	12800	0443	0035
31	12400	0408	0029
30	12000	0379	0028
29	11600	0351	0030
28	11200	0321	0027
27	10800	0294	0024
26	10400	0270	0021
25	10000	0249	0022
24	9600	0237	0022
23	9200	0205	0018
22	8800	0187	0017
21	8400	0170	0014
20	8000	0154	0017
19	7600	0137	0016
18	7200	0121	0014
17	6800	0107	0014
16	6400	0093	0012
15	6000	0081	0011
14	5600	0070	0008
13	5200	0062	0011
12	4800	0051	0006
11	4400	0045	0006
10	4000	0039	0006
9	3600	0033	0003
8	3200	0030	0004
7	2800	0026	0003
6	2400	0023	0003
5	2000	0020	0002
4	1600	0018	0003
3	1200	0015 / 0048	
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-22
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 ③ 4 5
 VERAGE WIDTH: 1.5014
 VERAGE THICKNESS: .3766
 REA: .5654
 BASELINE STRESS: 34KSC
 AX. LOAD: 19,223.6#
 CYCLES AT TERMINATION/_____
 2 Lives/_____



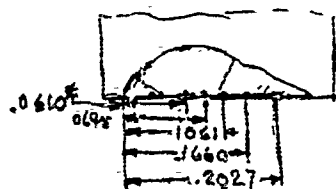
Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0422 / .1542	.0039
39	15600	.0383	.0030
38	15200	.0353	.0024
37	14800	.0329	.0026
36	14400	.0305	.0023
35	14000	.0280	.0027
34	13600	.0253	.0022
33	13200	.0231	.0019
32	12800	.0212	.0020
31	12400	.0192	.0019
30	12000	.0173	.0017
29	11600	.0156	.0017
28	11200	.0139	.0015
27	10800	.0124	.0013
26	10400	.0111	.0011
25	10000	.0100	.0011
24	9600	.0089	.0010
23	9200	.0079	.0011
22	8800	.0065	.0009
21	8400	.0058	.0007
20	8000	.0052	.0009
19	7600	.0048	.0005
18	7200	.0038	.0005
17	6800	.0033	.0004
16	6400	.0029	.0004
15	6000	.0025	.0003
14	5600	.0022	.0002
13	5200	.0020 / .005	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2 Lives
 $\%a = .27$

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-23
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 ④ 5
 VERAGE WIDTH: 1.5050
 VERAGE THICKNESS: .3766
 REA: .5667
 BASELINE STRESS: 34KSI
 AX. LOAD: 19267.8#
 CYCLES AT TERMINATION/_____
 2 Lives/_____



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0473 / .2057	.0033
39	15600	.0440	.0030
38	15200	.0410	.0031
37	14800	.0379	.0029
36	14400	.0350	.0023
35	14000	.0327	.0024
34	13600	.0303	.0020
33	13200	.0283	.0023
32	12800	.0260	.0020
31	12400	.0240	.0018
30	12000	.0222	.0017
29	11600	.0205	.0015
28	11200	.0190	.0015
27	10800	.0175	.0015
26	10400	.0160	.0015
25	10000	.0145	.0014
24	9600	.0131	.0013
23	9200	.0118	.0012
22	8800	.0106	.0010
21	8400	.0096	.0011
20	8000	.0085	.0010
19	7600	.0075	.0010
18	7200	.0065	.0010
17	6800	.0054	.0009
16	6400	.0045	.0007
15	6000	.0038	.0006
14	5600	.0032	.0004
13	5200	.0028 / .0182	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2 Lives
 $\%a = .15$

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-24

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

BRIDGE WIDTH: 1.5026

BRIDGE THICKNESS: .3657

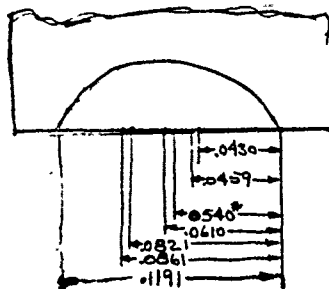
REA: .5495

BASE LINE STRESS: 34 ksi

AX. LOAD: 18,683 #

CYCLES AT TERMINATION/~~FAILURE~~

2 Lives/ _____



FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-25

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

BRIDGE WIDTH: 1.5022

BRIDGE THICKNESS: .3733

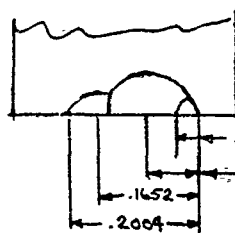
REA: .5607

BASELINE STRESS: 34 ksi

AX. LOAD: 19,063.8 #

CYCLES AT TERMINATION/~~FAILURE~~

STATIC LOAD - 30.2K # Lives/ _____



$\frac{a}{2c} = 60$

SLIVER ORIGIN
14

FRAC TOG RAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0337 / 1191	.0037
39	15600	0300	.0023
38	15200	0277	.0025
37	14800	0252	.0021
36	14400	0231	.0019
35	14000	0212	.0017
34	13600	0195	.0020
33	13200	0175	.0018
32	12800	0157	.0017
31	12400	0140	.0013
30	12000	0127	.0013
29	11600	0114	.0014
28	11200	0100	.0010
27	10800	0090	.0011
26	10400	0079	.0011
25	10000	0068	.0010
24	9600	0058	.0009
23	9200	0049	.0008
22	8800	0041	.0007
21	8400	0034	.0005
20	8000	0029	.0004
19	7600	0025	.0003
18	7200	0022	.0003
17	6800	0019 / 0056	.0003
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0463 / 2004	.0041
39	15600	0422	.0032
38	15200	0390	.0030
37	14800	0360	.0028
36	14400	0332	.0028
35	14000	0304	.0025
34	13600	0279	.0024
33	13200	0255	.0025
32	12800	0230	.0023
31	12400	0207	.0016
30	12000	0191	.0019
29	11600	0172	.0019
28	11200	0153	.0017
27	10800	0136	.0016
26	10400	0120	.0013
25	10000	0107	.0014
24	9600	0093	.0011
23	9200	0082	.0012
22	8800	0070	.0007
21	8400	0063	.0008
20	8000	0055	.0005
19	7600	0050	.0005
18	7200	0045	.0006
17	6800	0039	.0005
16	6400	0034	.0004
15	6000	0030	.0005
14	5600	0025	.0003
13	5200	0022	.0003
12	4800	0019	.0001
11	4400	0018	.0007
10	4000	0017	.0003
9	3600	0015	
8	3200	0012 / 002	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-26

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

VERAGE WIDTH: 1.5018

VERAGE THICKNESS: .3699

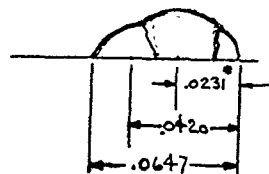
REA: .5555

ASELINE STRESS: 34ksi

AX. LOAD: 18,887 #

YCLES AT TERMINATION/~~FAILURE~~:

STATIC LOAD-32.3K# 2 Lives/_____



FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-27

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

VERAGE WIDTH: 1.5018

VERAGE THICKNESS: .3704

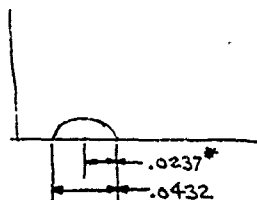
REA: .5562

ASELINE STRESS: 34ksi

AX. LOAD: 18,910.8 #

YCLES AT TERMINATION/~~FAILURE~~:

STATIC LOAD-32.4K# 2 Lives/_____



FRAC TOG RAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0194 / .0647	.0015
39	15600	.0179	.0018
38	15200	.0161	.0013
37	14800	.0148	.0015
36	14400	.0133	.0013
35	14000	.0120	.0012
34	13600	.0108	.0010
33	13200	.0098	.0009
32	12800	.0089	.0007
31	12400	.0081	.0007
30	12000	.0075	.0007
29	11600	.0068	.0006
28	11200	.0062	.0007
27	10800	.0055	.0006
26	10400	.0049	.0003
25	10000	.0046	.0005
24	9600	.0041	.0004
23	9200	.0037	.0005
22	8800	.0032	.0004
21	8400	.0028	.0005
20	8000	.0023	.0004
19	7600	.0019	.0002
18	7200	.0017 / .0043	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0160 / .0432	.0015
39	15600	.0145	.0014
38	15200	.0131	.0010
37	14800	.0121	.0011
36	14400	.0110	.0010
35	14000	.0100	.0010
34	13600	.0090	.0009
33	13200	.0081	.0006
32	12800	.0075	.0007
31	12400	.0068	.0008
30	12000	.0060	.0005
29	11600	.0055	.0006
28	11200	.0049	.0003
27	10800	.0046	.0005
26	10400	.0041	.0006
25	10000	.0035	.0005
24	9600	.0030	.0002
23	9200	.0028	.0004
22	8800	.0024	.0004
21	8400	.0020	.0004
20	8000	.0016 / .0045	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-28

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.5015

AVERAGE THICKNESS: .3771

REA: .5662

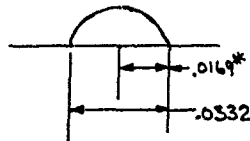
BASELINE STRESS: 34 KSI

MAX. LOAD: 19,250.8#

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 33.2 K#



Specimen Very Int

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-29

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

AVERAGE WIDTH: 1.4995

AVERAGE THICKNESS: .3775

AREA: .5675

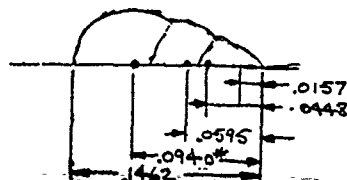
BASELINE STRESS: 34 KSI

MAX. LOAD: 19,296.4#

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 32.5 K#



FRAC TOG R A P H I C D A T A

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0129 / .0332	.0009
39	15600	.0120	.0010
38	15200	.0110	.0011
37	14800	.0099	.0009
36	14400	.0090	.0008
35	14000	.0082	.0005
34	13600	.0077	.0007
33	13200	.0072	.0002
32	12800	.0066	.0004
31	12400	.0061	.0005
30	12000	.0059	.0006
29	11600	.0058	.0004
28	11200	.0049	.0006
27	10800	.0043	.0003
26	10400	.0043	.0002
25	10000	.0038	.0004
24	9600	.0034	.0003
23	9200	.0031	.0002
22	8800	.0029	.0003
21	8400	.0026	.0004
20	8000	.0022	.0001
19	7600	.0021	.0003
18	7200	.0019	.0001
17	6800	.0018	.0001
16	6400	.0017	.0002
15	6000	.0015	.0002
14	5600	.0013	.0001
13	5200	.0012	.0001
12	4800	.0011 / .0017	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

$\%c = .65$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0339 / .1462	.0032
39	15600	.0207	.0026
38	15200	.0281	.0022
37	14800	.0259	.0022
36	14400	.0237	.0023
35	14000	.0214	.0021
34	13600	.0193	.0018
33	13200	.0175	.0017
32	12800	.0158	.0016
31	12400	.0142	.0013
30	12000	.0129	.0016
29	11600	.0113	.0013
28	11200	.0100	.0011
27	10800	.0089	.0010
26	10400	.0079	.0010
25	10000	.0069	.0007
24	9600	.0061	.0006
23	9200	.0054	.0006
22	8800	.0050	.0003
21	8400	.0042	.0004
20	8000	.0038	.0006
19	7600	.0032	.0004
18	7200	.0028	.0003
17	6800	.0025	.0004
16	6400	.0021	.0002
15	6000	.0019	.0002
14	5600	.0017	.0002
13	5200	.0015	.0002
12	4800	.0013 / .0025	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

$\%c = .52$

12

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WPF-30

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

AVERAGE WIDTH: 1.5019

AVERAGE THICKNESS: .3716

AREA: .5581

BASLINE STRESS: 34 ksci

MAX. LOAD: 12,975.4#

CYCLES AT TERMINATION/~~FAILURE~~:

2 Lives/_____

STATIC LOAD - 33.1 k#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0173	0023
39	15600	0150	0011
38	15200	0139	0011
37	14800	0127	0012
36	14400	0116	0011
35	14000	0105	0007
34	13600	0098	0010
33	13200	0088	0008
32	12800	0080	0006
31	12400	0074	0006
30	12000	0068	0008
29	11600	0060	0005
28	11200	0055	0006
27	10800	0049	0008
26	10400	0043	0005
25	10000	0042	0003
24	9600	0039	0002
23	9200	0037	0004
22	8800	0038	0002
21	8400	0031	0002
20	8000	0029	0002
19	7600	0027	0003
18	7200	0024	0003
17	6800	0021	0002
16	6400	0019	0001
15	6000	0016	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WPF-31

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.5017

AVERAGE THICKNESS: .3786

REA: .5685

BASLINE STRESS: 34 ksci

MAX. LOAD: 19,329#

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 33.0 k#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	02235	0013
39	15600	02102	00123
38	15200	01973	00123
37	14800	01850	00120
36	14400	01720	00143
35	14000	01577	00123
34	13600	01454	00104
33	13200	01350	00115
32	12800	01235	00101
31	12400	01134	00092
30	12000	01044	00082
29	11600	00962	00090
28	11200	00872	00060
27	10800	00812	00066
26	10400	00746	00058
25	10000	00688	00063
24	9600	00626	00048
23	9200	00577	00054
22	8800	00523	00041
21	8400	00482	00052
20	8000	00430	00045
19	7600	00385	00035
18	7200	00350	00035
17	6800	00315	00033
16	6400	00282	00032
15	6000	00250	00023
14	5600	00227	00032
13	5200	00195	00028
12	4800	00167	00019
11	4400	00143	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WPF-32

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

AVERAGE WIDTH: 1.5036

AVERAGE THICKNESS: .3719

AREA: .5591

BASILINE STRESS: 34 ksci

MAX. LOAD: 19,009.4#

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 30.6 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0478	0034
39	15600	0444	0036
38	15200	0408	0036
37	14800	0372	0028
36	14400	0344	0027
35	14000	0317	0029
34	13600	0288	0027
33	13200	0261	0020
32	12800	0241	0020
31	12400	0221	0019
30	12000	0202	0017
29	11600	0185	0017
28	11200	0168	0016
27	10800	0152	0014
26	10400	0139	0015
25	10000	0124	0012
24	9600	0112	0013
23	9200	0099	0010
22	8800	0089	0011
21	8400	0078	0009
20	8000	0069	0008
19	7600	0061	0007
18	7200	0054	0006
17	6800	0048	0011
16	6400	0039	0007
15	6000	0030	0002
14	5600	0028	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WPF-33

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

AVERAGE WIDTH: 1.5016

AVERAGE THICKNESS: .3769

AREA: .5659

BASILINE STRESS: 34 ksci

MAX. LOAD: 19240.6#

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 31 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0313	0027
39	15600	0276	0034
38	15200	0252	0027
37	14800	0225	0024
36	14400	0201	0022
35	14000	0179	0024
34	13600	0155	0018
33	13200	0137	0017
32	12800	0120	0020
31	12400	0100	0011
30	12000	0089	0010
29	11600	0079	0007
28	11200	0072	0011
27	10800	0061	0006
26	10400	0055	0006
25	10000	0049	0006
24	9600	0045	0005
23	9200	0038	0005
22	8800	0033	0003
21	8400	0030	0005
20	8000	0025	0003
19	7600	0022	0002
18	7200	0020	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-34
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: ① 2 3 4 5
 AVERAGE WIDTH: 1.5019
 AVERAGE THICKNESS: 3789
 AREA: .5690
 BASELINE STRESS: 34 KSE
 MAX. LOAD: 19346.0#
 CYCLES AT TERMINATION/FAILURE: _____
2 Lives/
Static Load - 31.9 K#

2 Lives

1 Life

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0411	0029
39	15600	0382	0031
38	15200	0351	0029
37	14800	0322	0034
36	14400	0298	0023
35	14000	0275	0023
34	13600	0252	0021
33	13200	0231	0020
32	12800	0211	0018
31	12400	0193	0017
30	12000	0176	0017
29	11600	0159	0017
28	11200	0142	0014
27	10800	0128	0015
26	10400	0113	0013
25	10000	0100	0010
24	9600	0090	0010
23	9200	0080	0009
22	8800	0071	0011
21	8400	0060	0009
20	8000	0051	0007
19	7600	0044	0005
18	7200	0039	0006
17	6800	0033	0005
16	6400	0028	0004
15	6000	0024	0003
14	5600	0021	0002
13	5200	0019	0002
12	4800	0017	0002
11	4400	0015	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-35
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 ② 4 5
 AVERAGE WIDTH: 1.5005
 AVERAGE THICKNESS: 3738
 AREA: .5608
 BASELINE STRESS: 34 KSE
 MAX. LOAD: 19,067.2#
 CYCLES AT TERMINATION/FAILURE: _____
2 Lives/

2 Lives

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0472	0047
39	15600	0425	0037
38	15200	0388	0032
37	14800	0354	0032
36	14400	0322	0029
35	14000	0293	0028
34	13600	0265	0024
33	13200	0247	0021
32	12800	0220	0024
31	12400	0196	0021
30	12000	0175	0021
29	11600	0154	0017
28	11200	0137	0017
27	10800	0120	0017
26	10400	0103	0011
25	10000	0092	0010
24	9600	0082	0010
23	9200	0072	0008
22	8800	0064	0007
21	8400	0057	0008
20	8000	0049	0006
19	7600	0043	0004
18	7200	0039	0005
17	6800	0034	0005
16	6400	0029	0001
15	6000	0028	0005
14	5600	0023	0003
13	5200	0020	0001
12	4800	0019	0004
11	4400	0015	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(15)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WPF-36

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

AVERAGE WIDTH: 1.4996

AVERAGE THICKNESS: .3752

AREA: .5626

BASLINE STRESS: 34KSI

MAX. LOAD: 19,128.4#

CYCLES AT TERMINATION/REMARKS:

2 Lives/_____

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WPF-37

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

AVERAGE WIDTH: 1.5001

AVERAGE THICKNESS: .3792

AREA: .5688

BASLINE STRESS: 34KSI

MAX. LOAD: 19,339.2#

CYCLES AT TERMINATION/REMARKS:

2 Lives/_____

STATIC LOAD - 33.0K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0195	0014
39	15600	0181	0013
38	15200	0168	0017
37	14800	0151	0012
36	14400	0139	0012
35	14000	0127	0013
34	13600	0114	0010
33	13200	0104	0010
32	12800	0094	0011
31	12400	0083	0005
30	12000	0078	0008
29	11600	0070	0008
28	11200	0062	0006
27	10800	0056	0007
26	10400	0049	0005
25	10000	0045	0006
24	9600	0039	0007
23	9200	0032	0002
22	8800	0030	0003
21	8400	0027	0005
20	8000	0022	0004
19	7600	0018	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0222	0015
39	15600	0202	0018
38	15200	0189	0017
37	14800	0172	0016
36	14400	0156	0014
35	14000	0142	0012
34	13600	0130	0011
33	13200	0119	0011
32	12800	0108	0011
31	12400	0097	0010
30	12000	0087	0010
29	11600	0077	0008
28	11200	0068	0007
27	10800	0062	0009
26	10400	0053	0004
25	10000	0049	0007
24	9600	0042	
23	9200	0039	
22	8800	0035	
21	8400	0031	
20	8000	0029	
19	7600	0025	
18	7200	0021	
17	6800	0020	
16	6400	0019	
15	6000	0018	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-38
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 ④ 5
 AVERAGE WIDTH: 1.5015
 AVERAGE THICKNESS: .3777
 AREA: .5671
 BASELINE STRESS: 34 Ksci
 MAX. LOAD: 19,281.4#
 CYCLES AT TERMINATION/REVERSE:
 2 Lives/_____
 STATIC LOAD - 32.8 K#

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0201	0015
39	15600	0186	0014
38	15200	0172	0010
37	14800	0162	0010
36	14400	0152	0011
35	14000	0141	0010
34	13600	0131	0009
33	13200	0122	0009
32	12800	0113	0011
31	12400	0102	0008
30	12000	0094	0007
29	11600	0085	0007
28	11200	0079	0007
27	10800	0072	0003
26	10400	0069	0006
25	10000	0062	0004
24	9600	0059	0007
23	9200	0052	0003
22	8800	0049	0004
21	8400	0045	0004
20	8000	0041	0003
19	7600	0038	0004
18	7200	0034	0005
17	6800	0029	0001
16	6400	0028	0003
15	6000	0025	0004
14	5600	0021	0002
13	5200	0019	0001
12	4800	0018	0003
11	4400	0015	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-39
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 ④ 5
 AVERAGE WIDTH: 1.5010
 AVERAGE THICKNESS: .3710
 AREA: .5568
 BASELINE STRESS: 34 Ksci
 MAX. LOAD: 18,931.2#
 CYCLES AT TERMINATION/REVERSE:
 2 Lives/_____
 STATIC LOAD - 32.3 K#

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0219	0019
39	15600	0200	0017
38	15200	0183	0013
37	14800	0170	0014
36	14400	0156	0014
35	14000	0142	0014
34	13600	0128	0010
33	13200	0118	0011
32	12800	0107	0012
31	12400	0095	0010
30	12000	0085	0005
29	11600	0080	0009
28	11200	0071	0005
27	10800	0066	0006
26	10400	0060	0005
25	10000	0055	0004
24	9600	0051	0003
23	9200	0048	0005
22	8800	0043	0003
21	8400	0040	0002
20	8000	0038	0005
19	7600	0033	0003
18	7200	0030	0001
17	6800	0029	0001
16	6400	0028	0004
15	6000	0024	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF -40
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: ① 2 3 4 5
 AVERAGE WIDTH: 1.4997
 AVERAGE THICKNESS: 3773
 AREA: .5658
 BASELINE STRESS: 34ksi
 MAX. LOAD: 19,237.2#
 CYCLES AT TERMINATION/~~FAILURE~~:
 2 Lives/ _____
31.7kx

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF -41
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 ② 3 4 5
 AVERAGE WIDTH: 1.5000
 AVERAGE THICKNESS: 3750
 AREA: .5625
 BASELINE STRESS: 34ksi
 MAX. LOAD: 19,125.0#
 CYCLES AT TERMINATION/~~FAILURE~~:
 2 Lives/ _____
Static Load - 32.4ksi

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.289	0.030
39	15600	0.259	0.022
38	15200	0.237	0.022
37	14800	0.215	0.016
36	14400	0.199	0.019
35	14000	0.180	0.020
34	13600	0.160	0.018
33	13200	0.142	0.012
32	12800	0.130	0.014
31	12400	0.116	0.014
30	12000	0.102	0.011
29	11600	0.091	0.011
28	11200	0.080	0.009
27	10800	0.071	0.007
26	10400	0.064	0.008
25	10000	0.056	0.006
24	9600	0.050	0.003
23	9200	0.047	0.007
22	8800	0.040	0.005
21	8400	0.035	0.005
20	8000	0.030	0.003
19	7600	0.027	0.006
18	7200	0.021	0.002
17	6800	0.019	
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2 Lives

$\%_{sc} = .40$

1 Life

(18)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-42

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

AVERAGE WIDTH: 1.5046

AVERAGE THICKNESS: .3770

AREA: .5672

BASLINE STRESS: 34ksi

MAX. LOAD: 19,284.8#

CYCLES AT TERMINATION/REMARKS:

2 Lives/_____

STATIC LOAD - 33.9k#

2 Lives
%_{LC} = .45

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0024/.0053	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-43

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

AVERAGE WIDTH: 1.5018

AVERAGE THICKNESS: .3782

AREA: .5679

BASLINE STRESS: 34ksi

MAX. LOAD: 19,308.6#

CYCLES AT TERMINATION/REMARKS:

2 Lives/_____

STATIC LOAD - 33.3k#

2 Lives
%_{LC} = .46

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0066/.0144	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(14)

2.1.2 WIF

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-1

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

VERAGE WIDTH: 1.5002

VERAGE THICKNESS: 3779 3766 3806 3765

REA: .5669

ASELINE STRESS: 34Ksc

AX. LOAD: 19275.5#

CYCLES AT TERMINATION/~~FAILURE~~:
2 Lives/STATIC LOAD - 28.1 K#

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1310	.0093
39	15600	.1217	.0069
38	15200	.1148	.0098
37	14800	.1050	.0001
36	14400	.0949	.0092
35	14000	.0857	.0092
34	13600	.0765	.0076
33	13200	.0689	.0070
32	12800	.0619	.0059
31	12400	.0560	.0051
30	12000	.0509	.0049
29	11600	.0460	.0048
28	11200	.0412	.0041
27	10800	.0371	.0035
26	10400	.0336	.0036
25	10000	.0300	.0030
24	9600	.0270	.0029
23	9200	.0241	.0028
22	8800	.0213	.0024
21	8400	.0189	.0024
20	8000	.0165	.0022
19	7600	.0143	.0021
18	7200	.0122	.0019
17	6800	.0103	.0014
16	6400	.0089	.0011
15	6000	.0078	.0009
14	5600	.0069	.0010
13	5200	.0059	.0010
12	4800	.0049 / 0202	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

 $\%c = .24$

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-2

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

VERAGE WIDTH: 1.501

VERAGE THICKNESS: 373 376 373

REA: .566

ASELINE STRESS: 34Ksc

AX. LOAD: 19,244#

CYCLES AT TERMINATION/~~FAILURE~~:
2 Lives/STATIC LOAD - 29.25 K#

SILVER FLAW - $a = .0006$
 $2c = .0026$
 $\%c = .23$
ZERO - BASE OF FLAW

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0856	.0078
39	15600	.0778	.0091
38	15200	.0687	.0038
37	14800	.0629	.0056
36	14400	.0573	.0043
35	14000	.0530	.0044
34	13600	.0486	.0044
33	13200	.0442	.0034
32	12800	.0408	.0042
31	12400	.0366	.0027
30	12000	.0339	.0030
29	11600	.0309	.0027
28	11200	.0282	.0022
27	10800	.0260	.0020
26	10400	.0240	.0022
25	10000	.0218	.0018
24	9600	.0200	.0018
23	9200	.0182	.0017
22	8800	.0165	.0014
21	8400	.0151	.0014
20	8000	.0137	.0013
19	7600	.0124	.0013
18	7200	.0111	.0012
17	6800	.0099	.0014
16	6400	.0085	.0011
15	6000	.0074	.0009
14	5600	.0065	.0007
13	5200	.0058	.0008
12	4800	.0050	.0007
11	4400	.0043	.0005
10	4000	.0038	.0005
9	3600	.0033	.0004
8	3200	.0029	.0005
7	2800	.0024	.0004
6	2400	.0020	.0004
5	2000	.0016	.0004
4	1600	.0012	.0003
3	1200	.0009	.0003
2	800	.0006	
1	400		

1 Life

FRAC TOG R A P H I C D A T A

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WIF-3

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 ⑤

AVERAGE WIDTH: 1.503

AVERAGE THICKNESS: 375 379 376

AREA: .564

BASLINE STRESS: 34ksi

MAX. LOAD: 19,176 #

CYCLES AT TERMINATION/~~FAILURE~~:

2 Lives/ _____

STATIC LOAD-29.0 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1100	.0102
39	15600	.0998	.0089
38	15200	.0909	.0072
37	14800	.0837	.0076
36	14400	.0761	.0066
35	14000	.0695	.0061
34	13600	.0634	.0054
33	13200	.0580	.0051
32	12800	.0529	.0048
31	12400	.0481	.0040
30	12000	.0441	.0040
29	11600	.0401	.0035
28	11200	.0366	.0029
27	10800	.0337	.0031
26	10400	.0306	.0026
25	10000	.0280	.0024
24	9600	.0256	.0023
23	9200	.0233	.0020
22	8800	.0213	.0022
21	8400	.0191	.0020
20	8000	.0171	.0021
19	7600	.0150	.0017
18	7200	.0133	.0020
17	6800	.0113	.0017
16	6400	.0096	.0019
15	6000	.0077	.0015
14	5600	.0062	.0013
13	5200	.0049	.0014
12	4800	.0035	.0013
11	4400	.0022	.0006
10	4000	.0016	.0006
9	3600	.0010	.0005
8	3200	.0005	.0004
7	2800	.0001	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WIF-4

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑥

AVERAGE WIDTH: 1.502

AVERAGE THICKNESS: 369 373 369

EA: .561

BASELINE STRESS: 34ksi

MAX. LOAD: 19,074 #

CYCLES AT TERMINATION/~~FAILURE~~:

2 Lives/ _____

STATIC LOAD-27.3K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1210	.0118
39	15600	.1092	.0102
38	15200	.0990	.0085
37	14800	.0905	.0084
36	14400	.0819	.0070
35	14000	.0749	.0072
34	13600	.0677	.0060
33	13200	.0617	.0055
32	12800	.0562	.0049
31	12400	.0513	.0044
30	12000	.0469	.0039
29	11600	.0430	.0037
28	11200	.0393	.0031
27	10800	.0362	.0027
26	10400	.0335	.0027
25	10000	.0308	.0027
24	9600	.0281	.0025
23	9200	.0256	.0025
22	8800	.0231	.0026
21	8400	.0205	.0022
20	8000	.0183	.0025
19	7600	.0158	.0019
18	7200	.0139	.0021
17	6800	.0118	.0017
16	6400	.0101	.0015
15	6000	.0086	.0013
14	5600	.0073	.0014
13	5200	.0059	.0010
12	4800	.0049	.0010
11	4400	.0039	.0008
10	4000	.0031	.0005
9	3600	.0026	.0003
8	3200	.0023	.0005
7	2800	.0018	.0003
6	2400	.0015	.0004
5	2000	.0011	.0002
4	1600	.0009	.0005
3	1200	.0004	
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-5
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 (4) 5
 VERAGE WIDTH: 1.501
 VERAGE THICKNESS: 371 376 371
 REA: .558
 BASELINE STRESS: 34KSC
 AX. LOAD: 18,972#
 CYCLES AT TERMINATION/FAILURE: _____
 2 Lives/
 STATIC LOAD - 23.3K#

2 Lives

1 Life

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.20200	.02180
39	15600	.18020	.02089
38	15200	.15931	.01716
37	14800	.14215	.01712
36	14400	.12503	.01288
35	14000	.11215	.01195
34	13600	.10020	.01029
33	13200	.09000	.00946
32	12800	.08054	.00790
31	12400	.07264	.00672
30	12000	.06592	.00642
29	11600	.05950	.00552
28	11200	.05398	.00493
27	10800	.04905	.00409
26	10400	.04496	.00411
25	10000	.04085	.00365
24	9600	.03720	.00318
23	9200	.03402	.00247
22	8800	.03155	.00255
21	8400	.02900	.00220
20	8000	.02680	.00218
19	7600	.02462	.00200
18	7200	.02262	.00157
17	6800	.02105	.00180
16	6400	.01925	.00147
15	6000	.01775	.00130
14	5600	.01628	.00156
13	5200	.01472	.00123
12	4800	.01349	.00137
11	4400	.01212	.00124
10	4000	.01088	.00117
9	3600	.00971	.00126
8	3200	.00845	.00128
7	2800	.00717	.00109
6	2400	.00608	.00080
5	2000	.00528	.00097
4	1600	.00431	.00103
3	1200	.00376	.00055
2	800	.00335	.00041
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-6
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 (5)
 VERAGE WIDTH: 1.499
 VERAGE THICKNESS: 373 378 373
 REA: .561
 BASELINE STRESS: 34KSC
 AX. LOAD: 19,744#
 CYCLES AT TERMINATION/FAILURE: _____
 2 Lives/
 STATIC LOAD - 28.9 K#

2 Lives

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0648	.0072
39	15600	.057	.0046
38	15200	.0530	.0040
37	14800	.0490	.0040
36	14400	.0450	.0039
35	14000	.0411	.0033
34	13600	.0378	.0031
33	13200	.0347	.0029
32	12800	.0318	.0024
31	12400	.0294	.0022
30	12000	.0272	.0024
29	11600	.0248	.0024
28	11200	.0224	.0020
27	10800	.0204	.0019
26	10400	.0185	.0016
25	10000	.0169	.0018
24	9600	.0151	.0015
23	9200	.0136	.0014
22	8800	.0122	.0013
21	8400	.0109	.0011
20	8000	.0098	.0014
19	7600	.0084	.0011
18	7200	.0073	.0008
17	6800	.0065	.0006
16	6400	.0059	.0008
15	6000	.0051	.0006
14	5600	.0045	.0006
13	5200	.0039	.0006
12	4800	.0033	.0005
11	4400	.0028	.0004
10	4000	.0024	.0004
9	3600	.0020	.0003
8	3200	.0017	.0004
7	2800	.0013	.0003
6	2400	.0010	.0002
5	2000	.0008	.0003
4	1600	.0005	.0002
3	1200	.0003	
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-7

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

ERAGE WIDTH: 1.500

ERAGE THICKNESS: 365 370 367

EA: .551

SELINE STRESS: 34ksi

X. LOAD: 18,734#

ICLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD -28.1 K#

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-8

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

ERAGE WIDTH: 1.500

ERAGE THICKNESS: 375 378 373

EA: .563

SELINE STRESS: 34ksi

X. LOAD: 19,42*

ICLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD -22.9 K#

FRACTOGRAPHIC DATA

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1051	.0121
39	15600	.0930	.0100
38	15200	.0830	.0084
37	14800	.0746	.0076
36	14400	.0670	.0070
35	14000	.0600	.0058
34	13600	.0542	.0062
33	13200	.0480	.0035
32	12800	.0445	.0035
31	12400	.0410	.0038
30	12000	.0372	.0034
29	11600	.0338	.0028
28	11200	.0310	.0027
27	10800	.0283	.0027
26	10400	.0256	.0022
25	10000	.0234	.0022
24	9600	.0212	.0021
23	9200	.0191	.0020
22	8800	.0171	.0019
21	8400	.0152	.0015
20	8000	.0137	.0014
19	7600	.0123	.0014
18	7200	.0109	.0009
17	6800	.0100	.0011
16	6400	.0089	.0010
15	6000	.0079	.0010
14	5600	.0069	.0015
13	5200	.0054	.0007
12	4800	.0047	.0007
11	4400	.0040	.0007
10	4000	.0033	.0005
9	3600	.0028	.0003
8	3200	.0025	.0002
7	2800	.0023	.0003
6	2400	.0020	.0002
5	2000	.0018	.0003
4	1600	.0015	.0003
3	1200	.0012	.0003
2	800	.0009	
1	400		

1 Life

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.21373	.02481
39	15600	.18972	.02222
38	15200	.16670	.02180
37	14800	.14490	.01756
36	14400	.12734	.01479
35	14000	.11255	.01255
34	13600	.10000	.01145
33	13200	.08865	.00976
32	12800	.07879	.00814
31	12400	.07065	.00700
30	12000	.06365	.00661
29	11600	.05704	.00562
28	11200	.05142	.00483
27	10800	.04659	.00451
26	10400	.04208	.00450
25	10000	.03758	.00329
24	9600	.03429	.00384
23	9200	.03045	.00275
22	8800	.02770	.00302
21	8400	.02468	.00271
20	8000	.02197	.00244
19	7600	.01953	.00234
18	7200	.01719	.00184
17	6800	.01525	.00167
16	6400	.01358	.00185
15	6000	.01173	.00148
14	5600	.01025	.00161
13	5200	.00864	.00131
12	4800	.00733	.00135
11	4400	.00598	.00109
10	4000	.00489	.00090
9	3600	.00399	.00109
8	3200	.00296	.00052
7	2800	.00238	.00077
6	2400	.00161	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

(23)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WIF-9

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 ⑤

VERAGE WIDTH: 1.501

VERAGE THICKNESS: 373 373 373

REA: .560

ASELINE STRESS: 34 KSC

AX. LOAD: 19,040#

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/_____

STATIC LOAD - 30.4 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.06258	.00569
39	15600	.05689	.00487
38	15200	.05202	.00485
37	14800	.04717	.00405
36	14400	.04312	.00344
35	14000	.03968	.00344
34	13600	.03622	.00333
33	13200	.03289	.00299
32	12800	.02990	.00287
31	12400	.02710	.00281
30	12000	.02428	.00267
29	11600	.02167	.00236
28	11200	.01926	.00208
27	10800	.01718	.00202
26	10400	.01516	.00167
25	10000	.01349	.00146
24	9600	.01203	.00136
23	9200	.01067	.00124
22	8800	.00943	.00120
21	8400	.00823	.00101
20	8000	.00722	.00104
19	7600	.00618	.00105
18	7200	.00513	.00072
17	6800	.00441	.00074
16	6400	.00367	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: WIF-10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑥

VERAGE WIDTH: 1.497

VERAGE THICKNESS: 370 370 371

EA: .555

SELINE STRESS: 34 KSC

AX. LOAD: 18,870#

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/_____

STATIC LOAD - 24.6 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.14478	.01553
39	15600	.12925	.01468
38	15200	.11457	.01203
37	14800	.10254	.01001
36	14400	.09253	.00905
35	14000	.08348	.00826
34	13600	.07522	.00741
33	13200	.06781	.00654
32	12800	.06127	.00559
31	12400	.05568	.00506
30	12000	.05062	.00450
29	11600	.04613	.00433
28	11200	.04179	.00391
27	10800	.03788	.00378
26	10400	.03410	.00332
25	10000	.03078	.00354
24	9600	.02722	.00365
23	9200	.02357	.00279
22	8800	.02078	.00307
21	8400	.01771	.00261
20	8000	.01510	.00215
19	7600	.01295	.00184
18	7200	.01111	.00165
17	6800	.00946	.00146
16	6400	.00800	.00129
15	6000	.00671	.00113
14	5600	.00558	.00097
13	5200	.00461	.00069
12	4800	.00392	.00071
11	4400	.00321	.00054
10	4000	.00267	.00045
9	3600	.00222	.00040
8	3200	.00182	.00029
7	2800	.00153	.00036
6	2400	.00117	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-11
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5
 CRACK WIDTH: 1.496
 CRACK THICKNESS: 377 378 377
 AREA: .564
 BASELINE STRESS: 34ksi
 MAX. LOAD: 19,176#
 REASONS AT TERMINATION/FAILURE:
 2 Lives/
 STATIC LOAD - 31.6 K#

2 Lives

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0320	.0024
39	15600	.0296	.0021
38	15200	.0275	.0021
37	14800	.0254	.0022
36	14400	.0232	.0018
35	14000	.0214	.0018
34	13600	.0196	.0017
33	13200	.0179	.0016
32	12800	.0163	.0013
31	12400	.0150	.0016
30	12000	.0134	.0013
29	11600	.0121	.0014
28	11200	.0107	.0012
27	10800	.0095	.0013
26	10400	.0083	.0009
25	10000	.0073	.0011
24	9600	.0062	.0007
23	9200	.0055	.0005
22	8800	.0050	.0008
21	8400	.0042	.0005
20	8000	.0037	.0006
19	7600	.0031	.0004
18	7200	.0027	.0003
17	6800	.0024	.0003
16	6400	.0021	.0003
15	6000	.0018	.0004
14	5600	.0014	.0003
13	5200	.0011	.0002
12	4800	.0009	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-12
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 6
 CRACK WIDTH: 1.500
 CRACK THICKNESS: 374 373 375
 AREA: .561
 BASELINE STRESS: 34ksi
 MAX. LOAD: 19,074
 REASONS AT TERMINATION/FAILURE:
 2 Lives/
 STATIC LOAD - 26.9 K#

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1621	.0151
39	15600	.1470	.0151
38	15200	.1329	.0131
37	14800	.1198	.0113
36	14400	.1085	.0096
35	14000	.0989	.0094
34	13600	.0895	.0097
33	13200	.0798	.0077
32	12800	.0721	.0071
31	12400	.0650	.0072
30	12000	.0578	.0057
29	11600	.0527	.0057
28	11200	.0470	.0048
27	10800	.0422	.0038
26	10400	.0384	.0033
25	10000	.0357	.0035
24	9600	.0316	.0034
23	9200	.0282	.0030
22	8800	.0252	.0031
21	8400	.0221	.0026
20	8000	.0195	.0026
19	7600	.0169	.0021
18	7200	.0148	.0022
17	6800	.0126	.0018
16	6400	.0108	.0017
15	6000	.0091	.0015
14	5600	.0076	.0013
13	5200	.0063	.0014
12	4800	.0049	.0013
11	4400	.0036	.0012
10	4000	.0024	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: WIF-13
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5
 CRACK WIDTH: 1.498
 CRACK THICKNESS: 373 378 373
 K_{EA}: .561
 BASELINE STRESS: 34 ksi
 A. LOAD: 19074#
 CONDITIONS AT TERMINATION/FAILURE:

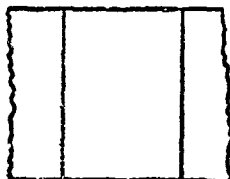
2 Lives / 153,494 L.P.s
 STATIC LOAD - 25.0 K#

FRACTOGRAPHIC DATA

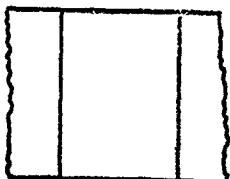
Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1698	.0166
39	15600	.1532	.0162
38	15200	.1370	.0141
37	14800	.1229	.0120
36	14400	.1109	.0117
35	14000	.0992	.0101
34	13600	.0891	.0099
33	13200	.0792	.0081
32	12800	.0711	.0073
31	12400	.0638	.0059
30	12000	.0579	.0059
29	11600	.0520	.0047
28	11200	.0473	.0043
27	10800	.0430	.0038
26	10400	.0392	.0038
25	10000	.0354	.0033
24	9600	.0321	.0028
23	9200	.0293	.0031
22	8800	.0262	.0029
21	8400	.0233	.0024
20	8000	.0209	.0025
19	7600	.0184	.0024
18	7200	.0160	.0024
17	6800	.0136	.0018
16	6400	.0118	.0017
15	6000	.0101	.0016
14	5600	.0085	.0012
13	5200	.0073	.0010
12	4800	.0063	.0009
11	4400	.0054	.0007
10	4000	.0047	.0008
9	3600	.0039	.0005
8	3200	.0034	.0007
7	2800	.0027	.0005
6	2400	.0022	.0004
5	2000	.0018	.0003
4	1600	.0015	.0004
3	1200	.0011	.0005
2	800	.0006	
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-38 (WPB-1)
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5013
AVERAGE THICKNESS: .3779
AREA: .5673
BASELINE STRESS: 33 KSI
MAX. LOAD: 18,722 #
CYCLES AT TERMINATION/FAILURE: * 3Lives/
@ 93,888 L.P.s = 3645.2 FLTS *



SPECIMEN NUMBER: WPF-1 (WPB-2)
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.5012
AVERAGE THICKNESS: .3762
AREA: .5648
BASELINE STRESS: 33 KSI
MAX. LOAD: 18636.8 #
CYCLES AT TERMINATION/FAILURE: 3Lives/99017 L.P.s



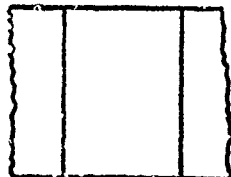
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
3760		
3660	.1279	.0223
3560	.1143	.0177
3460	.1003	.0143
3360	.0874	.0113
3260	.0755	.0095
3160	.0656	.0078
3060	.0570	.0067
2960	.0495	.0060
2860	.0423	.0052
2760	.0365	.0044
2660	.0317	.0038
Two Lives	2560	.0276
2480	.0240	
2380	.0215	
2280	.0193	
2180	.0172	
2080	.0149	
1980	.0130	
1880	.0111	
1780	.0095	
1680	.0081	
1580	.0066	
1480	.0057	
1380	.0050	
One Life	1280	.0043
1200	.0038	
1100	.0029	
1000	.0020	
900	.0016	
800	.0014	
700	.0006	
600		
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.1172
3760	.1070	
3660	.0877	
3560	.0743	
3460	.0630	
3360	.0541	
3260	.0470	
3160	.0403	
3060	.0357	
2960	.0309	
2860	.0270	
2760	.0233	
2660	.0203	
Two Lives	2560	.0180
2480	.0158	
2380	.0133	
2280	.0110	
2180	.0086	
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life	1280	
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		

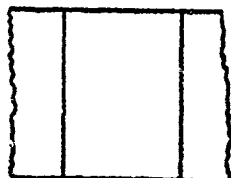
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-2 (WPB-3)
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.5007 _____
AVERAGE THICKNESS: .3803 _____
AREA: .5707 _____
BASELINE STRESS: 33 ksi _____
MAX. LOAD: 18833.6 # _____
CYCLES AT TERMINATION/FAILURE: 3 Lives / 990117 LPS



SPECIMEN NUMBER: WPF-3 (WPB-4)
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.5017 _____
AVERAGE THICKNESS: .3712 _____
AREA: .5574 _____
BASELINE STRESS: 33 ksi _____
MAX. LOAD: 18395.2 # _____
CYCLES AT TERMINATION/FAILURE: 3 Lives / 990117 LPS



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840	.1107	.0113
3760	.0994	.0117
3660	.0877	.0107
3560	.0770	.0095
3460	.0675	.0082
3360	.0593	.0076
3260	.0517	.0076
3160	.0441	.0052
3060	.0389	.0052
2960	.0337	.0041
2860	.0296	.0038
2760	.0258	.0031
2660	.0227	.0030
Two Lives 2560	.0197	.0021
2480	.0176	.0028
2380	.0148	.0024
2280	.0124	.0022
2180	.0102	
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840	.0842	.0129
3760	.0713	.0126
3660	.0587	.0107
3560	.0480	.0088
3460	.0392	.0064
3360	.0328	.0050
3260	.0278	.0042
3160	.0236	.0039
3060	.0197	.0028
2960	.0169	.0025
2860	.0144	.0024
2760	.0120	
2660		
Two Lives 2560		
2480		
2380		
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPF-4(WPB-5)

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

AVERAGE WIDTH: 1.4960 _____

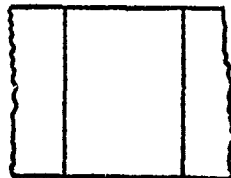
AVERAGE THICKNESS: .3708 _____

AREA: .5547

BASILINE STRESS: 33ksi

MAX. LOAD: 18305.7

CYCLES AT TERMINATION/FAILURE: * 3Lives/990117LPs
@ 943395LRs



SPECIMEN NUMBER: WPF-5(WPB-6)

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.5048 _____

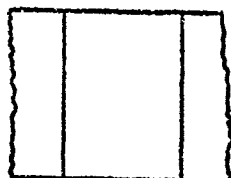
AVERAGE THICKNESS: .3720 _____

AREA: .5598

BASILINE STRESS: 33ksi

MAX. LOAD: 18472.9#

CYCLES AT TERMINATION/FAILURE: 3Lives/990117LPs



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840		
3760		
* 3658.8	4390	.1262
3560	.3128	.0516
3460	.2612	.0415
3360	.2197	.0330
3260	.1867	.0282
3160	.1585	.0235
3060	.1350	.0200
2960	.1150	.0187
2860	.0963	.0169
2760	.0794	.0132
2660	.0662	.0112
Two Lives 2560	.0550	.0068
2480	.0432	.0068
2380	.0414	.0064
2280	.0359	.0040
2180	.0310	.0047
2080	.0263	.0037
1980	.0226	.0034
1880	.0192	.0032
1780	.0160	.0023
1680	.0137	.0018
1580	.0119	.0021
1480	.0098	
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840	.0986	.0132
3760	.0854	.0126
3660	.0728	.0111
3560	.0617	.0094
3460	.0523	.0075
3360	.0448	.0063
3260	.0385	.0049
3160	.0336	.0043
3060	.0293	.0038
2960	.0255	.0033
2860	.0222	.0029
2760	.0192	.0025
2660	.0168	.0020
Two Lives 2560	.0148	.0018
2460	.0130	.0020
2380	.0110	
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-7

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.5014

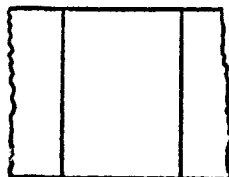
AVERAGE THICKNESS: .3725

AREA: .5593

BASILINE STRESS: 33 ksi

MAX. LOAD: 18,456 #

CYCLES AT ~~TERMINATION~~ / FAILURE: * 3 Lives /
@ 86,031 L.P. = 3358.75 FLT's *



SPECIMEN NUMBER: WPB-8

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

AVERAGE WIDTH: 1.5030

AVERAGE THICKNESS: .3729

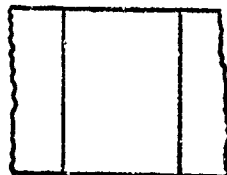
AREA: .5605

BASILINE STRESS: 33 ksi

MAX. LOAD: 18,555.0 #

CYCLES AT TERMINATION / ~~FAILURE~~: 3 Lives /

STATIC LOAD = 33.1 k#



FRACTOGRAPHIC DATA

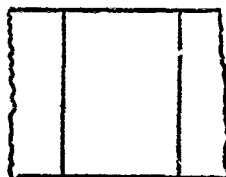
FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	.3781
	3160	.2441
	3060	.1866
	2960	.1474
	2860	.1200
	2760	.0974
	2660	.0772
	2560	.0613
Two Lives	2480	.0474
	2380	.0403
	2280	.0328
	2180	.0271
	2080	.0223
	1980	.0180
	1880	.0148
	1780	.0120
	1680	.0093
	1580	.0084
	1480	.0070
	1380	.0057
	1280	.0046
One Life	1200	.0037
	1100	.0027
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.1464
	3760	.1258
	3660	.1068
	3560	.0901
	3460	.0760
	3360	.0636
	3260	.0538
	3160	.0465
	3060	.0395
	2960	.0340
	2860	.0293
	2760	.0251
	2660	.0217
Two Lives	2560	.0190
	2480	.0170
	2380	.0147
	2280	.0125
	2180	.0107
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

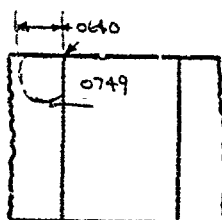
GENERAL DYNAMICS
Worth Division
ABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-9
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5022
AVERAGE THICKNESS: .3743
AREA: .5623
BASELINE STRESS: 33KSC
MAX. LOAD: 18,555#
CYCLES AT TERMINATION/FAILURE: 3Lives/
Static Load - 33.1K#



SPECIMEN NUMBER: WPB-10
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5015
AVERAGE THICKNESS: .3763
AREA: .5650
BASELINE STRESS: 33KSC
MAX. LOAD: 17,645.5#
CYCLES AT TERMINATION/FAILURE: 3Lives/
Static Load - 31.6K#

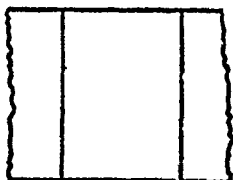


FRACTOGRAPHIC DATA

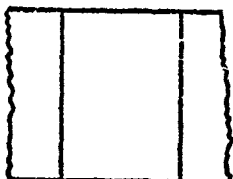
FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0111
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.061
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-11
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5 6
AVERAGE WIDTH: 1.5016 _____
AVERAGE THICKNESS: .3806 _____
AREA: .5715 _____
BASELINE STRESS: 33 ksc
MAX. LOAD: 18,859.8#
CYCLES AT TERMINATION/REVERSE: 3Lives/



SPECIMEN NUMBER: WPB-12
SPECTRUM: Bomber
TEST DATE: 10/1/68
TEST FRAME: 1 ② 3 4 5 6
AVERAGE WIDTH: 1.4990 _____
AVERAGE THICKNESS: .3843 _____
AREA: .5761 _____
BASELINE STRESS: 33 ksc
MAX. LOAD: 19,010.2#
CYCLES AT TERMINATION/REVERSE: 3Lives/



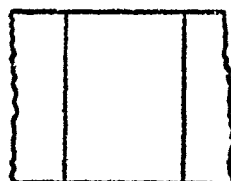
FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .1610	.0219
	3760 .1391	.0213
	3660 .1178	.0178
	3560 .1007	.0155
	3460 .0852	.0125
	3360 .0727	.0107
	3260 .0620	.0087
	3160 .0533	.0073
	3060 .0460	.0063
	2960 .0397	.0046
	2860 .0357	.0054
	2760 .0297	.0041
	2660 .0256	.0037
Two Lives	2560 .0219	.0025
	2480 .0194	.0036
	2380 .0158	.0028
	2280 .0130	.0018
	2180 .0112	.0020
	2080 .0092	.0017
	1980 .0075	.0010
	1880 .0065	.0009
	1780 .0054	.0007
	1680 .0049	.0008
	1580 .0031	.0007
	1480 .0034	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .0196 .0143	.0020 .0015
	3760 .0176 .0128	.0017 .0017
	3660 .0158 .0111	.0023 .0019
	3560 .0135 .0092	.0019 .0017
	3460 .0117 .0075	.0017 .0015
	3360 .0111 .0060	.0016 .0010
	3260 .0088 .0050	.0013
	3160 .0077	.0011
	3060 .0066	.0011
	2960 .0059	.0007
	2860 .0053	.0006
	2760 .0047	.0006
	2660 .0043	.0004
Two Lives	2560 .0041	.0002
	2480 .0038	.0003
	2380 .0035	.0003
	2280 .0032	.0003
	2180 .0029	.0001
	2080 .0028	.0002
	1980 .0026	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

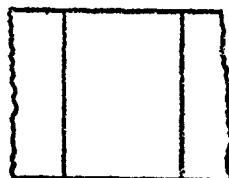
GENERAL BY: AMSC
of March Division
ABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-13
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5 6
AVERAGE WIDTH: 1.5016 _____
AVERAGE THICKNESS: .3752 _____
AREA: .5634 _____
BASELINE STRESS: 33ksi _____
MAX. LOAD: 18,592.2# _____
CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/ _____
STATIC LOAD - 22.0 K#



SPECIMEN NUMBER: WPB-14
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.5014 _____
AVERAGE THICKNESS: .3821 _____
AREA: .5737 _____
BASELINE STRESS: 33ksi _____
MAX. LOAD: 18,931.6# _____
CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/ _____



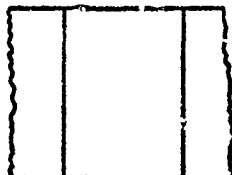
FRACTOGRAPHIC DATA

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 .2914	.0393
	3760 .2521	.0388
	3660 .2133	.0304
	3560 .1829	.0247
	3460 .1582	.0219
	3360 .1363	.0192
	3260 .1171	.0170
	3160 .1001	.0135
	3060 .0866	.0146
	2960 .0720	.0113
	2860 .0607	.0090
	2760 .0517	.0084
	2660 .0433	.0064
Two Lives	2560 .0369	.0046
	2480 .0323	.0044
	2380 .0279	.0039
	2280 .0246	.0033
	2180 .0207	.0029
	2080 .0178	.0028
	1980 .0150	.0022
	1880 .0128	.0019
	1780 .0109	.0013
	1680 .0096	.0011
	1580 .0085	.0013
	1480 .0072	.0009
	1380 .0063	.0010
One Life	1280 .0053	.0004
	1200 .0049	.0007
	1100 .0042	.0005
	1000 .0037	.0004
	900 .0033	.0005
	800 .0028	.0004
	700 .0024	.0004
	600 .0020	.0003
	500 .0017	.0004
	400 .0013	
	300	
	200	

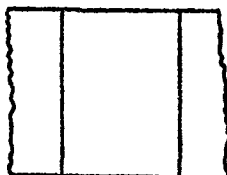
FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 .0743 .0524 .0111 .0068	
	3760 .0632 .0456 .0095 .0060	
	3660 .0537 .0396 .0079 .0074	
	3560 .0458 .0346 .0066 .0050	
	3460 .0392 .0305 .0051 .0041	
	3360 .0341 .0270 .0042 .0035	
	3260 .0299 .0237 .0036 .0033	
	3160 .0263 .0208 .0028 .0029	
	3060 .0235 .0182 .0025 .0026	
	2960 .0210 .0155 .0034 .0017	
	2860 .0174 .0135 .0018 .0020	
	2760 .0156 .0118 .0016 .0017	
	2660 .0140 .0105 .0012 .0013	
Two Lives	2560 .0128 .0098 .0011 .0007	
	2480 .0117 .0089 .0015 .0009	
	2380 .0102 .0081 .0013 .0008	
	2280 .0089 .0072 .0012 .0008	
	2180 .0077 .0064 .0014 .0008	
	2080 .0063 .0056 .0007 .0008	
	1980 .0056 .0048 .0005 .0007	
	1880 .0050 .0041 .0008 .0008	
	1780 .0042 .0033 .0006 .0006	
	1680 .0036 .0027 .0006 .0007	
	1580 .0030 .0020 .0003 .0005	
	1480 .0027 .0015 .0004 .0003	
	1380 .0023 .0012 .0006	
One Life	1280 .0017 .0002	
	1200 .0015 .0005	
	1100 .0010	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-15
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5001 _____
AVERAGE THICKNESS: .3717 _____
AREA: .5576
BASELINE STRESS: 33 ksc
MAX. LOAD: 18,400.8#
CYCLES AT TERMINATION/FAILURE: _____ 3Lives/_____



SPECIMEN NUMBER: WPB-16
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.4999 _____
AVERAGE THICKNESS: .3786 _____
AREA: .5611
BASELINE STRESS: 33 ksc
MAX. LOAD: 18,740.7#
CYCLES AT TERMINATION/FAILURE: * 3Lives/_____
@ 909936 L.P.s = 3529.03 FLTS.*



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .0510 .0497 .0014 .0086	
	3760 .0496 .0411 .0064 .0076	
	3660 .0432 .0335 .0042 .0051	
	3560 .0370 .0284 .0052 .0047	
	3460 .0318 .0237 .0040 .0032	
	3360 .0278 .0205 .0040 .0042	
	3260 .0238 .0162 .0025 .0022	
	3160 .0213 .0140 .0030 .0020	
	3060 .0183 .0120 .0024 .0020	
	2960 .0159 .0100 .0027 .0017	
	2860 .0132 .0083 .0016	
	2760 .0116	.0012
	2660 .0104	.0012
Two Lives	2560 .0092	.0011
	2480 .0081	.0011
	2380 .0070	.0010
	2280 .0060	.0012
	2180 .0048	.0007
	2080 .0041	.0007
	1980 .0034	.0007
	1880 .0027	.0005
	1780 .0022	.0005
	1680 .0017	.0006
	1580 .0011	.0006
	1480 .0005	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560 .3792	.0883
	3460 .2909	.0599
	3360 .2310	.0410
	3260 .1900	.0327
	3160 .1573	.0267
	3060 .1311	.0211
	2960 .1100	.0175
	2860 .0925	.0158
	2760 .0767	.0143
	2660 .0624	.0106
Two Lives	2560 .0518	.0055
	2480 .0463	.0070
	2380 .0393	.0055
	2280 .0338	.0044
	2180 .0294	.0039
	2080 .0255	.0038
	1980 .0217	.0034
	1880 .0183	.0031
	1780 .0152	.0027
	1680 .0125	.0027
	1580 .0098	.0017
	1480 .0081	.0016
	1380 .0065	.0010
One Life	1280 .0055	.0006
	1200 .0049	.0010
	1100 .0039	.0008
	1000 .0031	.0007
	900 .0024	.0004
	800 .0020	.0003
	700 .0017	.0004
	600 .0013	.0002
	500 .0011	.0002
	400 .0009	
	300	
	200	

GENERAL DYNAMICS
of Worth Division
ABUATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-17

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5020

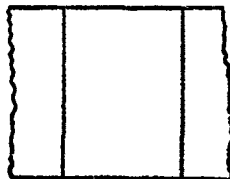
AVERAGE THICKNESS: .3736

AREA: .5611

BASLINE STRESS: 33Ksc

MAX. LOAD: 18,516.3#

CYCLES AT TERMINATION/~~FAILURE~~ 3Lives/



SPECIMEN NUMBER: WPB-18

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5013

AVERAGE THICKNESS: .3782

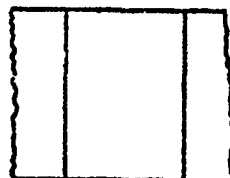
AREA: .5678

BASLINE STRESS: 33Ksc

MAX. LOAD: 18,737

CYCLES AT TERMINATION/~~FAILURE~~ 3Lives/

STATIC LOAD - 27.2K#



FRACTOGRAPHIC DATA

FLIGHT CYCLES	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 .4250 .1940 .0380 .0423	
	3760 3870 .1517 .0707 .0434	
	3660 3163 .1083 .0502 .0336	
	3560 2661 .0747 .0396 .0225	
	3460 2265 .0521 .0220 .0149	
	3360 2045 .0372 .0104 .0093	
	3260 1941 .0279 .0263 .0062	
	3160 1678 .0217 .0225 .0043	
	3060 1453 .0174 .0188 .0032	
	2960 1265 .0142 .0160 .0026	
	2860 1105 .0116 .0149 .0023	
	2760 0820 .0093 .0136 .0015	
	2660 0700 .0079 .0120 .0016	
Two Lives	2560 0603 .0062 .0097 .0007	
	2480 0544 .0055 .0057 .0005	
	2380 0474 .0050 .0062 .0007	
	2280 0408 .0043 .0053 .0006	
	2180 0355 .0037 .0048 .0005	
	2080 0307 .0032 .0045 .0006	
	1980 0262 .0026 .0040 .0003	
	1880 0222 .0023 .0034 .0003	
	1780 0188 .0020 .0028 .0002	
	1680 0160 .0018 .0027 .0003	
	1580 0133 .0015 .0023 .0002	
	1480 0110 .0013 .0015 .0002	
	1380 0095 .0011 .0025 .0001	
One Life	1280 0070 .0010 .0010 .0002	
	1200 0060 .0008 .0010 .0001	
	1100 0050 .0007 .0007 .0002	
	1000 0043 .0005 .0010 .0002	
	900 0037 .0003 .0009 .0001	
	800 0027 .0002 .0005	
	700 0018 .0005	
	600 0013 .0004	
	500 0008	
	400 0004	
	300	
	200	
	100	
	0	
FLIGHT CYCLES	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 .1028 .1020 .0140 .0150	
	3760 0888 .0870 .0135 .0120	
	3660 0750 .0750 .0119 .0111	
	3560 0631 .0639 .0094 .0096	
	3460 0537 .0543 .0080 .0081	
	3360 0457 .0462 .0059 .0064	
	3260 0398 .0398 .0056 .0057	
	3160 0342 .0341 .0049 .0046	
	3060 0293 .0295 .0033 .0044	
	2960 0260 .0251 .0036 .0036	
	2860 0222 .0215 .0030 .0028	
	2760 0192 .0187 .0029 .0037	
	2660 0165 .0150 .0020 .0021	
Two Lives	2560 0143 .0129 .0016 .0022	
	2480 0127 .0107 .0018 .0019	
	2380 0109 .0088 .0014 .0021	
	2280 0095 .0067 .0012 .0014	
	2180 0083 .0053 .0010 .0005	
	2080 0073 .0048 .0011 .0006	
	1980 0062 .0042 .0009 .0004	
	1880 0053 .0038 .0008 .0004	
	1780 0045 .0034 .0007 .0004	
	1680 0036 .0030 .0005 .0003	
	1580 0033 .0027 .0004 .0004	
	1480 0029 .0023 .0005 .0004	
	1380 0024 .0019 .0004 .0003	
One Life	1280 0020 .0016 .0002 .0002	
	1200 0018 .0014 .0002	
	1100 0016 .0003	
	1000 0013 .0001	
	900 0012 .0002	
	800 0010 .0002	
	700 0008 .0003	
	600 0005 .0003	
	500 0002	
	400	
	300	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-19

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.5003

AVERAGE THICKNESS: 0.3755

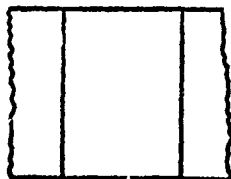
AREA: 5634

BASILINE STRESS: 33 KSI

MAX. LOAD: 18,591.6#

CYCLES AT ~~TERMINATION~~/FAILURE: * 3 Lives/

© 979,526 L.P.'s = 3798.92 FLTS *
@ 85.6% LOAD



SPECIMEN NUMBER: WPB-20

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: 0.3759

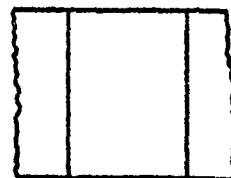
AREA: 5638

BASILINE STRESS: 33 KSI

MAX. LOAD: 18,605.8#

CYCLES AT TERMINATION/~~FAILURE~~: 3 Lives/

STATIC LOAD - 33.3 K#



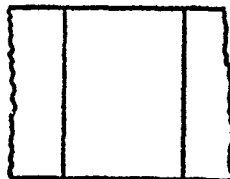
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
* Three Lives 3760	4.225	0.655
3660	3.570	0.780
3560	2.790	0.450
3460	2.340	0.374
3360	1.966	0.318
3260	1.648	0.272
3160	1.376	0.240
3060	1.136	0.191
2960	0.945	0.167
2860	0.778	0.129
2760	0.649	0.116
2660	0.533	0.089
2560	0.444	0.079
Two Lives 2480	0.365	0.033
2380	0.332	0.049
2280	0.283	0.040
2180	0.243	0.036
2080	0.207	0.039
1980	0.173	0.068
1880	0.145	0.025
1780	0.129	0.023
1680	0.097	0.015
1580	0.082	0.012
1480	0.070	0.011
1380	0.059	0.012
1280	0.047	0.008
One Life 1200	0.039	
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840	0.041 / 0.0670	0.014
3760	0.127	0.010
3660	0.117	0.015
3560	0.102	0.012
3460	0.090	0.011
3360	0.079	0.008
3260	0.071	0.012
3160	0.059	0.009
3060	0.050	0.007
2960	0.043	0.008
2860	0.035	
2760		
2660		
Two Lives 2560		
2480		
2380		
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		

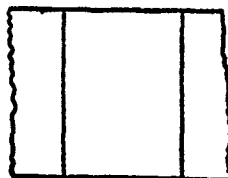
GENERAL DYNAMICS
Aircraft Division
ABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-21
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5 6
AVERAGE WIDTH: 1.5022 _____
AVERAGE THICKNESS: .3770 _____
AREA: .5656 _____
BASELINE STRESS: 33ksi _____
MAX. LOAD: 18,664 # _____
CYCLES AT TERMINATION/FAILURE: 3Lives/ _____
Static Load - 23.3 k#



SPECIMEN NUMBER: WPB-22
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.4995 _____
AVERAGE THICKNESS: .3736 _____
AREA: .5602 _____
BASELINE STRESS: 33ksi _____
MAX. LOAD: 18487.0 _____
CYCLES AT TERMINATION/FAILURE: 3Lives/990117LPs
Static Load - 30.0 k#



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.2597
	3760	.2260
	3660	.1854
	3560	.1558
	3460	.1335
	3360	.1145
	3260	.0980
	3160	.0800
	3060	.0690
	2960	.0573
	2860	.0481
	2760	.0408
	2660	.0343
Two Lives	2560	.0284
	2480	.0220
	2380	.0197
	2280	.0168
	2180	.0144
	2080	.0123
	1980	.0101
	1880	.0083
	1780	.0071
	1680	.0060
	1580	.0052
	1480	.0043
	1380	.0037
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.0673
	3760	.0582
	3660	.0490
	3560	.0415
	3460	.0351
	3360	.0273
	3260	.0253
	3160	.0218
	3060	.0187
	2960	.0161
	2860	.0142
	2760	.0123
	2660	.0107
Two Lives	2560	.0092
	2480	.0084
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-23

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.5017 _____

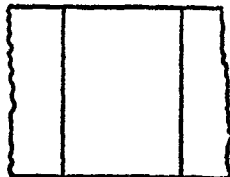
AVERAGE THICKNESS: .3710 _____

AREA: .5571

BASLINE STRESS: 33ksi

MAX. LOAD: 18385.3 #

CYCLES AT ~~TERMINATION~~/FAILURE: * 3Lives/990117695
@ 891819 L.P.S



SPECIMEN NUMBER: WPB-24 %c = .42

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6

AVERAGE WIDTH: 1.5015 _____

AVERAGE THICKNESS: .3712 _____

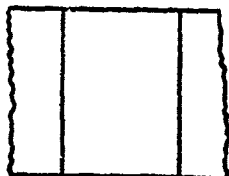
AREA: .5574

BASLINE STRESS: 33ksi

MAX. LOAD: 18,392.8 #

CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/

STATIC LOAD - 32.8KA



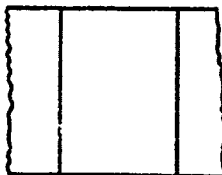
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840		
3760		
3660		
3560		
* 3460	.3433	.1141
3360	.2292	.0566
3260	.1726	.0412
3160	.1314	.0330
3060	.0984	.0216
2960	.0768	.0167
2860	.0601	.0124
2760	.0477	.0097
2660	.0380	.0078
Two Lives 2560	.0302	.0044
2480	.0257	.0040
2380	.0218	.0036
2280	.0182	.0030
2180	.0152	.0026
2080	.0126	.0019
1980	.0107	.0016
1880	.0091	.0018
1780	.0073	
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840	.0117	2C = .0280
3760		
3660		
3560		
3460		
3360		
3260		
3160		
3060		
2960		
2860		
2760		
2660		
Two Lives 2560		
2480		
2380		
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1390		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		

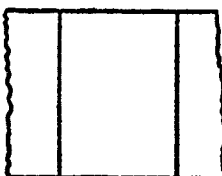
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-25
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.5030
AVERAGE THICKNESS: .3729
AREA: .5605
BASELINE STRESS: 33ksi
MAX. LOAD: 18,495.5
CYCLES AT TERMINATION/_____: 3Lives/____



SPECIMEN NUMBER: WPB-26
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5026
AVERAGE THICKNESS: .3743
AREA: .5624
BASELINE STRESS: 33ksi
MAX. LOAD: 18,560#
CYCLES AT TERMINATION/_____: 3Lives/____



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 .3347	.0626
	3760 .2721	.0529
	3660 .2192	.0412
	3570 .1780	.0322
	3460 .1458	.0277
	3360 .1181	.0253
	3260 .0938	.0221
	3160 .0717	.0133
	3060 .0584	.0114
	2960 .0470	.0088
	2860 .0382	.0067
	2760 .0315	.0053
	2660 .0262	.0037
Two Lives	2560 .0225	.0031
	2480 .0194	.0029
	2380 .0165	.0030
	2280 .0135	.0026
	2180 .0109	.0025
	2080 .0084	.0012
	1980 .0072	.0010
	1880 .0062	.0010
	1780 .0052	.0007
	1680 .0045	.0007
	1580 .0038	.0007
	1480 .0031	.0005
	1380 .0026	.0006
One Life	1280 .0020	.0003
	1200 .0017	.0004
	1100 .0013	.0003
	1000 .0010	.0004
	900 .0006	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 .0772 .0350	.0104 .0055
	3760 .0668 .0295	.0102 .0047
	3660 .0566 .0248	.0085 .0042
	3560 .0481 .0206	.0073 .0033
	3460 .0408 .0173	.0062 .0028
	3360 .0346 .0145	.0055 .0023
	3260 .0291 .0122	.0033 .0021
	3160 .0258 .0101	.0043 .0015
	3060 .0215 .0086	.0029 .0014
	2960 .0186 .0072	.0026 .0010
	2860 .0160 .0062	.0023 .0011
	2760 .0137 .0051	.0020 .0007
	2660 .0117 .0044	.0016 .0008
Two Lives	2560 .0101 .0036	.0009 .0006
	2480 .0092 .0030	.0010
	2380 .0082	.0018
	2280 .0070	.0012
	2180 .0058	.0009
	2080 .0049	.0014
	1980 .0035	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Worth Division
ABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-27

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6

AVERAGE WIDTH: 1.5034

AVERAGE THICKNESS: .3753

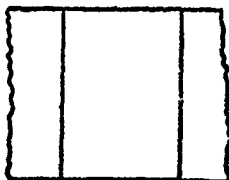
AREA: 5642

BAS. LINE STRESS: 33 KSC

MAX. LOAD: 18,619.5#

CYCLES AT TERMINATION/~~NUMBER~~ 3Lives/

STATIC LOAD - 23.1 K#



SPECIMEN NUMBER: WPB-28 $\%a = .49 \rightarrow$

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6

AVERAGE WIDTH: 1.5014

AVERAGE THICKNESS: .3754

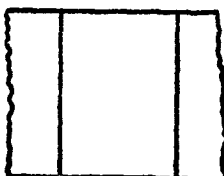
AREA: 5636

BAS. LINE STRESS: 33 KSC

MAX. LOAD: 18,599.6#

CYCLES AT TERMINATION/~~NUMBER~~ 3Lives/

STATIC LOAD - 34.0 K#



FRACTOGRAPHIC DATA

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840	.2023	.0306
3760	.1717	.0288
3660	.1429	.0229
3560	.1205	.0187
3460	.1018	.0157
3360	.0861	.0129
3260	.0732	.0112
3160	.0626	.0102
3060	.0518	.0078
2960	.0440	.0066
2860	.0374	.0057
2760	.0317	.0049
2660	.0268	.0041
Two Lives 2560	.0227	.0032
2480	.0205	.0028
2380	.0177	.0025
2280	.0152	.0029
2180	.0123	.0016
2080	.0107	.0015
1980	.0092	.0014
1880	.0078	.0009
1780	.0069	.0007
1680	.0060	.0007
1580	.0053	.0007
1480	.0046	
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		
FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840	.0072	2c = .0148
3760		
3660		
3560		
3460		
3360		
3260		
3160		
3060		
2960		
2860		
2760		
2660		
Two Lives 2560		
2480		
2380		
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		

GENERAL DYNAMICS
Fort Worth Division
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FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-29

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

AVERAGE WIDTH: 1.5009 _____

AVERAGE THICKNESS: .3797 _____

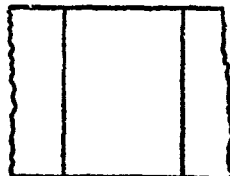
AREA: .5699

BASLINE STRESS: 33 KSI

MAX. LOAD: 18,806.4

CYCLES AT TERMINATION/REMARKS: 3 Lives / 990117 LR!

STATIC LOAD - 30.8 K#



SPECIMEN NUMBER: WPB-30

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

AVERAGE WIDTH: 1.5024 _____

AVERAGE THICKNESS: .3759 _____

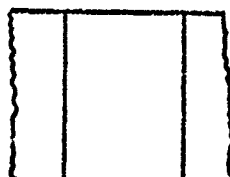
AREA: .5648

BASLINE STRESS: 33 KSI

MAX. LOAD: 18,636.8 #

CYCLES AT TERMINATION/REMARKS: 3 Lives /

STATIC LOAD - 31.9 K#



FRACIOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840	.0547	.0077
3760	.0470	.0065
3660	.0405	.0058
3560	.0347	.0044
3460	.0303	.0038
3360	.0265	.0031
3260	.0234	.0028
3160	.0206	.0015
3060	.0181	.0023
2960	.0158	.0023
2860	.0135	.0018
2760	.0117	.0017
2660	.0100	.0016
Two Lives 2560	.0084	.0011
2480	.0073	.0011
2380	.0062	
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		
100		
0		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840	.0437	.0064
3760	.0373	.0055
3660	.0318	.0050
3560	.0268	.0040
3460	.0228	.0032
3360	.0196	.0029
3260	.0167	.0020
3160	.0147	.0018
3060	.0129	.0015
2960	.0114	.0017
2860	.0097	.0014
2760	.0083	.0013
2660	.0070	.0015
Two Lives 2560	.0055	.0009
2480	.0046	.0009
2380	.0037	.0010
2280	.0027	
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		
100		
0		

GENERAL DYNAMICS
Fort Worth Division
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FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-31

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.5022 _____

AVERAGE THICKNESS: .3708 _____

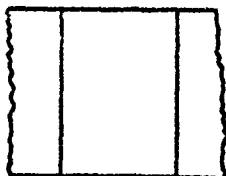
AREA: .5570

BASELINE STRESS: 33Ksi

MAX. LOAD: 18,381.5*

CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/

STATIC LOAD - 31.7K*



SPECIMEN NUMBER: WPB-32

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.5013 _____

AVERAGE THICKNESS: .3737 _____

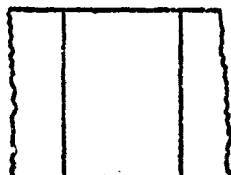
AREA: .5610

BASELINE STRESS: 33Ksi

MAX. LOAD: 18514.2

CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/270117K*

STATIC LOAD - 30.2K*



FRAC TOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.0269
	3760	.0244
	3660	.0220
	3560	.0197
	3460	.0175
	3360	.0156
	3260	.0139
	3160	.0125
	3060	.0112
	2960	.0101
	2860	.0091
	2760	.0081
	2660	.0072
Two Lives	2560	.0064
	2480	.0059
	2380	.0049
	2280	.0043
	2180	.0037
	2080	.0032
	1980	.0030
	1880	.0028
	1780	.0025
	1680	.0022
	1580	.0019
	1480	.0015
	1380	.0012
One Life	1280	.0010
	1200	.0009
	1100	.0008
	1000	.0007
	900	.0006
	800	.0005
	700	.0004
	600	.0003
	500	
	400	
	300	
	200	
	100	
	0	
Three Lives	3840	.0530
	3760	.0466
	3660	.0405
	3560	.0348
	3460	.0302
	3360	.0268
	3260	.0239
	3160	.0212
	3060	.0188
	2960	.0167
	2860	.0147
	2760	.0128
	2660	.0112
Two Lives	2560	.0098
	2480	.0085
	2380	.0073
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	

GENERAL DYNAMICS
Worth Division
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FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-33

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6

AVERAGE WIDTH: 1.5001

AVERAGE THICKNESS: 3732

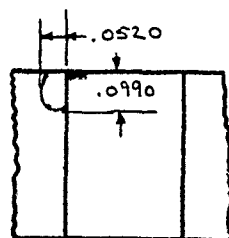
AREA: .5598

BASILINE STRESS: 33ksi

MAX. LOAD: 18,474.6#

CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/

STATIC LOAD - 32.1K#



SPECIMEN NUMBER: WPB-34

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 6

AVERAGE WIDTH: 1.5012

AVERAGE THICKNESS: 3744

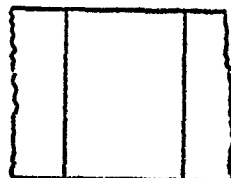
AREA: .5620

BASILINE STRESS: 33ksi

MAX. LOAD: 18,547.6#

CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/

STATIC LOAD - 29.6K#



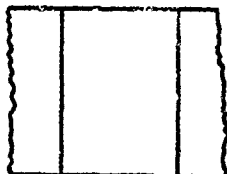
FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.001
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.0936
	3760	.0818
	3660	.0708
	3560	.0603
	3460	.0515
	3360	.0446
	3260	.0386
	3160	.0333
	3060	.0288
	2960	.0251
	2860	.0218
	2760	.0188
	2660	.0163
Two Lives	2560	.0148
	2480	.0133
	2380	.0117
	2280	.0105
	2180	.0094
	2080	.0087
	1980	.0076
	1880	.0068
	1780	.0060
	1680	.0053
	1580	.0047
	1480	.0040
	1380	.0033
One Life	1280	.0027
	1200	.0023
	1100	.0018
	1000	.0014
	900	.0010
	800	.0007
	700	.0005
	600	.0003
	500	
	400	
	300	
	200	

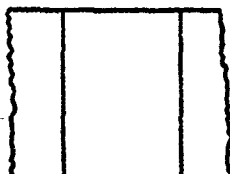
FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-35 *
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.5020
AVERAGE THICKNESS: 3738
AREA: .5614
BASELINE STRESS: 33KSI
MAX. LOAD: 18,527.8#
CYCLES AT ~~TERMINATION~~/FAILURE: * 3Lives/
@ 984,672 L.R.'s = 3818.88 FLT's *



SPECIMEN NUMBER: WPB-36
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.5025
AVERAGE THICKNESS: 3738
AREA: .5616
BASELINE STRESS: 33KSI
MAX. LOAD: 18,533.9
CYCLES AT TERMINATION/FAILURE: 3Lives/99017 L.R.
STATIC LOAD - 31.6 K#



FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	4346	.0888
3760	3458	.0637
3660	2521	.0413
3560	2408	.0335
3460	2073	.0278
3360	1795	.0242
3260	1553	.0211
3160	1342	.0190
3060	1152	.0170
2960	0982	.0134
2860	0848	.0132
2760	0726	.0098
2660	0628	.0076
Two Lives	2560	.0552
2480	0403	.0054
2380	0439	.0048
2280	0391	.0043
2180	0348	.0034
2080	0314	.0031
1980	0283	.0032
1880	0250	.0033
1780	0217	.0026
1680	0191	.0025
1580	0166	.0022
1480	0144	.0024
1380	0120	.0021
One Life	1280	.0099
1200	.0075	.0021
1100	.0054	.0016
1000	.0038	.0010
900	.0028	.0010
800	.0018	.0008
700	.0010	.0003
600	.0007	
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.0341
3760	.0304	.0037
3660	.0267	.0034
3560	.0233	.0026
3460	.0207	.0028
3360	.0179	.0018
3260	.0161	.0018
3160	.0143	.0018
3060	.0125	.0013
2960	.0112	.0014
2860	.0098	.0014
2760	.0084	.0011
2660	.0073	.0009
Two Lives	2560	.0064
2480	.0058	.0006
2380		
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life	1280	
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		

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FATIGUE TEST DATA

SPECIMEN NUMBER: WPB-37

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5

AVERAGE WIDTH: 1.5018 _____

AVERAGE THICKNESS: 3762 _____

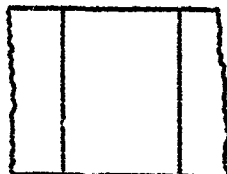
AREA: 5.50 _____

BASELINE STRESS: 33 KSC _____

MAX. LOAD: 18,644.2 # _____

CYCLES AT TERMINATION/FAILURE: 31 lives/ _____

STATIC LOAD - 32.4 K#



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.0173
	3760	.0163
	3680	.0141
	3560	.0121
	3460	.0104
	3360	.0089
	3260	.0079
	3160	.0069
	3060	.0058
	2960	.0050
	2860	.0041
	2760	.0037
	2660	.0032
Two Lives	2560	.0029
	2480	.0026
	2380	.0021
	2280	.0017
	2180	.0014
	2080	.0010
	1980	.0007
	1880	.0005
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: W1B-1

SPECTRUM: Amber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.4998

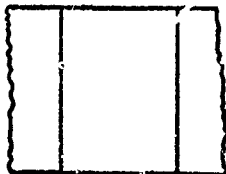
AVERAGE THICKNESS: 3760 3753 3766 3762

AREA: .5640

BASELINE STRESS: 33ksc

MAX. LOAD: 18611.2#

CYCLES AT ~~TEMPERATURE~~/FAILURE: * 3 Lives / _____
 @ 672.6434 Ps = 2608.73 Ft-Hrs *



SPECIMEN NUMBER: WIB-2

SPECTRUM: Bomber

TEST DATE:

TEST FRAME: 1 2 3 4 5 (6)

AVERAGE WIDTH: 1.5068

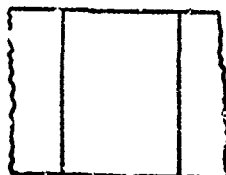
AVERAGE THICKNESS: 3775 3771 3786 3768

AREA: .5666

BASELINE STRESS: 33ksi

MAX. LOAD: 18.696.2#

CYCLES AT TEST SECTION/FAILURE: * 3Lives/990117LPS
@ 881,520 LPS = 3418.83 FLT-Hrs *



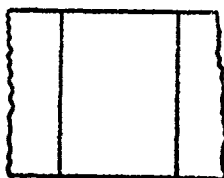
FRAC TOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840		
3760		
3660		
3560		
3460		
3360		
3260		
3160		
3060		
2960		
2860		
2760		
2660	.4131	.0822
Two Lives 2560	.3309	.0589
2480	.2720	.0491
2380	.2229	.0343
2280	.1886	.0251
2180	.1635	.0215
2080	.1420	.0180
1980	.1240	.0168
1880	.1072	.0142
1780	.0930	.0125
1680	.0805	.0102
1580	.0703	.0093
1480	.0610	.0079
1380	.0531	.0080
One Life 1280	.0451	.0028
1200	.0423	.0050
1100	.0373	.0044
1000	.0329	.0029
900	.0280	.0029
800	.0271	
700		
600		
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840		
3760		
3660		
3560		
3460	.3468	.0616
3360	.2852	.0630
3260	.2222	.0415
3160	.1807	.0306
3060	.1501	.0241
2960	.1260	.0198
2860	.1062	.0171
2760	.0891	.0139
2660	.0752	.0109
Two Lives 2560	.0643	.0070
2480	.0573	.0078
2380	.0495	.0060
2280	.0435	.0055
2180	.0380	.0045
2080	.0335	.0043
1980	.0298	.0037
1880	.0255	.0030
1780	.0225	.0030
1680	.0195	.0032
1580	.0163	.0023
1480	.0140	.0020
1380	.0120	.0019
One Life 1280	.0101	.0010
1200	.0091	.0013
1100	.0079	.0011
1000	.0068	.0013
900	.0055	.0008
800	.0047	.0009
700	.0038	.0010
600	.0028	.0009
500	.0019	.0008
400	.0011	.0006
300	.0005	
200		

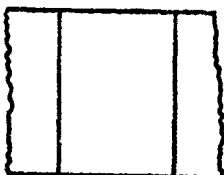
GENERAL DYNAMICS
Fort Worth Division
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FATIGUE TEST DATA

SPECIMEN NUMBER: WIB-3
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 374 375 371
AREA: .571
BASELINE STRESS: 33 ksc
MAX. LOAD: 18,843 #
CYCLES AT ~~TRANSITION~~/FAILURE: * 3 Lives / 99,011 L.P.'s
@ 940,815 L.P.'s = 3648.79 FLT-HRS *



SPECIMEN NUMBER: WIB-4
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.499
AVERAGE THICKNESS: 374 377 372
AREA: .566
BASELINE STRESS: 33 ksc
MAX. LOAD: 18,678 #
CYCLES AT ~~TRANSITION~~/FAILURE: * 3 Lives / _____
= @ 711,304 L.P.'s @ 98.5% Load
→ 2758.67 FLT-HRS *



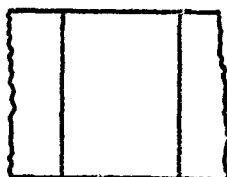
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840		
3760		
3660	.3694	.1206
3560	.2488	.0789
3460	.1899	.0409
3360	.1490	.0319
3260	.1171	.0231
3160	.0940	.0177
3060	.0763	.0128
2960	.0635	.0106
2860	.0529	.0091
2760	.0438	.0078
2660	.0360	.0051
Two Lives 2560	.0309	.0044
2480	.0265	.0046
2380	.0219	.0048
2280	.0171	.0030
2180	.0141	.0026
2080	.0115	.0018
1980	.0097	.0018
1880	.0079	.0017
1780	.0062	.0012
1680	.0050	.0008
1580	.0042	.0009
1480	.0033	
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840		
3760		
3660		
3560		
3460		
3360		
3260		
3160		
3060		
2960		
2860		
2760	.3108	.0735
2660	.2373	.0495
Two Lives 2560	.1878	.0274
2480	.1604	.0270
2380	.1334	.0226
2280	.1108	.0178
2180	.0930	.0170
2080	.0760	.0141
1980	.0619	.0108
1880	.0511	.0078
1780	.0433	.0062
1680	.0371	.0056
1580	.0315	.0046
1480	.0269	.0048
1380	.0221	.0039
One Life 1280	.0182	.0032
1200	.0160	.0023
1100	.0137	.0026
1000	.0111	.0022
900	.0089	.0020
800	.0069	.0016
700	.0053	.0012
600	.0041	
500		
400		
300		
200		

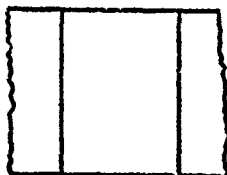
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WIB-5
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: _____
AREA: .560
BASELINE STRESS: 33 KSI
MAX. LOAD: 18,480 #
CYCLES AT TERMINATION/FAILURE: 2 Lives/
STATIC LOAD - 32.1 K#



SPECIMEN NUMBER: WIB-6
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.497
AVERAGE THICKNESS: 374 378 374
AREA: .561
BASELINE STRESS: 33 KSI
MAX. LOAD: 18,513 #
CYCLES AT TERMINATION/FAILURE: 8 Lives/
STATIC LOAD - 27.5 K#



FRACTOGRAPHIC DATA

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0260
	2480	.0235
	2380	.0206
	2280	.0183
	2180	.0162
	2080	.0142
	1980	.0123
	1880	.0106
	1780	.0092
	1680	.0080
	1580	.0066
	1480	.0058
	1380	.0050
One Life	1280	.0044
	1200	.0040
	1100	.0034
	1000	.0028
	900	.0021
	800	.0015
	700	.0012
	600	.0009
	500	
	400	
	300	
	200	
FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3750	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1285
	2480	.1111
	2380	.0920
	2280	.0770
	2180	.0643
	2080	.0541
	1980	.0452
	1880	.0385
	1780	.0325
	1680	.0275
	1580	.0235
	1480	.0201
	1380	.0163
One Life	1280	.0137
	1200	.0120
	1100	.0099
	1000	.0080
	900	.0061
	800	.0046
	700	.0032
	600	.0023
	500	.0016
	400	.0011
	300	.0005
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WIB-7

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.498

AVERAGE THICKNESS: _____

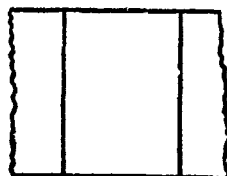
AREA: .568

BASELINE STRESS: 33ksi

MAX. LOAD: 18,744#

CYCLES AT TERMINATION/FAILURE: * 3 Lives/

→ 902,162 L.P.'s @ 83% Load
→ 3498.88 FLT.-Hrs *



SPECIMEN NUMBER: WIB-8

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: _____ 375 377 377

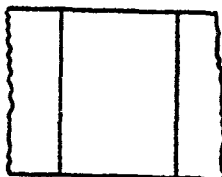
AREA: .569

BASELINE STRESS: 38ksi

MAX. LOAD: 18,777#

CYCLES AT TERMINATION/FAILURE: 2 8 Lives/

STATIC Load - 30.8 k#



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840		
3760		
3660		
3560	.3480	.0702
3460	.2972	.0718
3360	.2254	.0442
3260	.1812	.0330
3160	.1482	.0240
3060	.1242	.0192
2960	.1050	.0158
2860	.0892	.0136
2760	.0754	.0118
2660	.0638	.0098
Two Lives 2560	.0540	.0065
2480	.0475	.0067
2380	.0408	.0057
2280	.0351	.0051
2180	.0300	.0039
2080	.0261	.0034
1980	.0227	.0037
1880	.0190	.0029
1780	.0161	.0023
1680	.0133	.0022
1580	.0111	.0020
1480	.0091	.0016
1380	.0075	.0015
One Life 1280	.0060	.0009
1200	.0051	.0008
1100	.0043	.0008
1000	.0035	.0006
900	.0029	.0005
800	.0024	.0004
700	.0020	.0002
600	.0018	
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840		
3760		
3660		
3560		
3460		
3360		
3260		
3160		
3060		
2960		
2860		
2760		
2660		
Two Lives 2560	.0497	.0066
2480	.0431	.0074
2380	.0357	.0056
2280	.0301	.0043
2180	.0258	.0032
2080	.0226	.0032
1980	.0194	.0028
1880	.0166	.0024
1780	.0142	.0019
1680	.0123	.0021
1580	.0102	.0019
1480	.0083	.0018
1380	.0065	.0010
One Life 1280	.0055	.0009
1200	.0046	.0010
1100	.0036	.0006
1000	.0030	.0006
900	.0024	.0006
800	.0018	.0006
700	.0012	.0002
600	.0010	.0005
500	.0005	.0003
400	.0002	
300		

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: WIB-9

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ~~2~~ 3 4 5

AVERAGE WIDTH: 1.500 _____

AVERAGE THICKNESS: 379 378 383 379

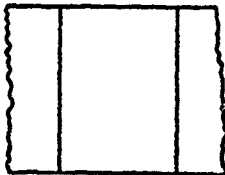
AREA: .569

BASELINE STRESS: 33ksi

MAX. LOAD: 18,777#

CYCLES AT TERMINATION/~~REDACTED~~: 2 8Lives/

STATIC LOAD - 31.6 KN



FLTS
100 0001

SPECIMEN NUMBER: WIB-10

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 4 5

AVERAGE WIDTH: 1498

AVERAGE THICKNESS: 378 379 378

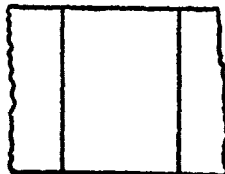
AREA: 571

BASELINE STRESS: 33 ksi

MAX. LGAD: 18.843 #

CYCLES AT TERMINATION/~~REASON~~: 3Lives/

STATIC LOAD - 27.85K#



FRAC TOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH.	INCREMENT INCH.
Three Lives 3840		
3760		
3660		
3560		
3460		
3360		
3260		
3160		
3060		
2960		
2860		
2760		
2660		
Two Lives 2560	.0298	.0040
2480	.0258	.0038
2380	.0220	.0034
2280	.0186	.0033
2180	.0153	.0024
2080	.0129	.0021
1980	.0108	.0018
1880	.0090	.0009
1780	.0081	.0009
1680	.0072	.0011
1580	.0061	.0011
1480	.0050	.0009
1380	.0041	.0003
One Life 1280	.0038	.0004
1200	.0034	.0003
1100	.0031	.0007
1000	.0024	.0003
900	.0021	.0002
800	.0019	.0004
700	.0015	.0003
600	.0012	.0001
500	.0011	.0002
400	.0009	.0002
300	.0007	.0003
200	.0004	.0003
FLIGHT HOURS	CRACK LENGTH INCH.	INCREMENT INCH.
Three Lives 3840	.0995	.0161
3760	.0834	.0147
3660	.0687	.0133
3560	.0554	.0097
3460	.0457	.0076
3360	.0381	.0056
3260	.0325	.0055
3160	.0270	.0041
3060	.0229	.0040
2960	.0189	.0038
2860	.0151	.0028
2760	.0123	.0023
2660	.0100	.0015
Two Lives 2560	.0085	.0015
2480	.0070	.0014
2380	.0056	.0009
2280	.0047	.0014
2180	.0033	.0009
2080	.0024	.0004
1980	.0020	.0007
1880	.0013	.0004
1780	.0009	.0003
1680	.0006	.0004
1580	.0002	
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		

FATIGUE TEST DATA

SPECIMEN NUMBER: WIB-11

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 2 3 4 5

AVERAGE WIDTH: 1.500

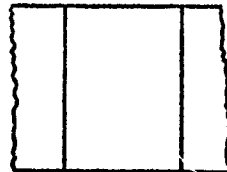
AVERAGE THICKNESS: 378 378 380 375

AREA: .566 .567

BASILINE STRESS: 33 KSI

MAX. LOAD: 18,694.5 #

CYCLES AT TERMINATION/FAILURE: * 3Lives/
@ 953,792 L.R.G. = 3699.12 FLT-HRS *



SPECIMEN NUMBER: WIB-12

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.500

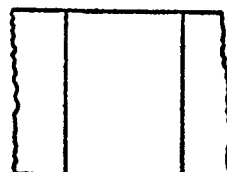
AVERAGE THICKNESS: 376 378 377

AREA: .571

BASILINE STRESS: 33 KSI

MAX. LOAD: 18,843 #

CYCLES AT TERMINATION/FAILURE: * 3Lives/
@ 866,031 L.R.G. = 3358.75 FLT-HRS *



FRAC TOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840		
3760	.3506	.0602
3660	.2904	.0732
3560	.2172	.0452
3460	.1720	.0322
3360	.1398	.0256
3260	.1142	.0207
3160	.0935	.0171
3060	.0764	.0136
2960	.0628	.0109
2860	.0519	.0096
2760	.0423	.0070
2660	.0353	.0047
Two Lives 2560	.0306	.0037
2480	.0269	.0038
2380	.0231	.0030
2280	.0201	.0031
2180	.0170	.0023
2080	.0147	.0022
1980	.0125	.0020
1880	.0105	.0018
1780	.0092	.0014
1680	.0079	.0010
1580	.0069	.0009
1480	.0060	.0008
1380	.0052	.0006
One Life 1280	.0046	.0004
1200	.0042	.0004
1100	.0038	.0004
1000	.0034	.0004
900	.0030	.0004
800	.0026	.0004
700	.0022	.0004
600	.0018	.0004
500	.0014	.0004
400	.0010	.0004
300	.0006	.0003
200	.0003	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840		
3760		
3660		
3560		
3460		
3360	.3108	.0924
3260	.2184	.0562
3160	.1622	.0390
3060	.1232	.0280
2960	.0952	.0204
2860	.0748	.0155
2760	.0593	.0116
2660	.0477	.0083
Two Lives 2560	.0394	.0046
2480	.0348	.0056
2380	.0292	.0049
2280	.0243	.0042
2180	.0201	.0033
2080	.0168	.0027
1980	.0141	.0021
1880	.0120	.0020
1780	.0100	.0016
1680	.0084	.0014
1580	.0070	.0015
1480	.0055	.0010
1380	.0045	
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		

2.1.5 QPF

FATIGUE TEST DATASPECIMEN NUMBER: QPF-1SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 (5)

VERAGE WIDTH: 1.497VERAGE THICKNESS: 3.748 3.68 3.72 3.69REA: .561BASELINE STRESS: 34 KsiAX. LOAD: 19,074 #

CYCLES AT TERMINATION/_____:

2 Lives/____

STATIC LOAD - 30.8 K#

FRACTOGRAPHIC DATA

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0347	.0027
39	15600	.0320	.0024
38	15200	.0296	.0018
37	14800	.0278	.0019
36	14400	.0259	.0019
35	14000	.0240	.0021
34	13600	.0219	.0019
33	13200	.0200	.0018
32	12800	.0182	.0018
31	12400	.0164	.0013
30	12000	.0151	.0017
29	11600	.0134	.0014
28	11200	.0120	.0013
27	10800	.0107	.0012
26	10400	.0095	.0010
25	10000	.0085	.0012
24	9600	.0073	.0011
23	9200	.0062	.0008
22	8800	.0054	.0004
21	8400	.0050	.0007
20	8000	.0043	.0003
19	7600	.0040	.0005
18	7200	.0035	.0004
17	6800	.0031	.0003
16	6400	.0028	.0004
15	6000	.0024	.0003
14	5600	.0021	.0001
13	5200	.0020	.0002
12	4800	.0018	.0003
11	4400	.0015	.0001
10	4000	.0014	.0003
9	3600	.0011	.0002
8	3200	.0009	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-2SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 (3) 4 5

VERAGE WIDTH: 1.498VERAGE THICKNESS: 3.70 3.71 3.65REA: .560BASELINE STRESS: 34 KsiAX. LOAD: 19,040 #

CYCLES AT TERMINATION/_____:

2 Lives/____

STATIC LOAD @ 30.1 K#

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0640	.0059
39	15600	.0581	.0051
38	15200	.0530	.0045
37	14800	.0485	.0041
36	14400	.0444	.0036
35	14000	.0408	.0033
34	13600	.0375	.0030
33	13200	.0345	.0027
32	12800	.0318	.0026
31	12400	.0292	.0022
30	12000	.0270	.0020
29	11600	.0250	.0022
28	11200	.0228	.0021
27	10800	.0207	.0017
26	10400	.0190	.0019
25	10000	.0171	.0016
24	9600	.0155	.0015
23	9200	.0140	.0014
22	8800	.0126	.0013
21	8400	.0113	.0013
20	8000	.0100	.0014
19	7600	.0086	.0008
18	7200	.0078	.0010
17	6800	.0068	.0008
16	6400	.0060	.0008
15	6000	.0052	.0006
14	5600	.0046	.0007
13	5200	.0039	.0005
12	4800	.0034	.0004
11	4400	.0030	.0003
10	4000	.0027	.0005
9	3600	.0022	.0003
8	3200	.0019	.0004
7	2800	.0015	.0002
6	2400	.0013	.0002
5	2000	.0011	.0002
4	1600	.0009	.0003
3	1200	.0006	
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-3
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 ④ 5
 VERAGE WIDTH: 1.499
 VERAGE THICKNESS: 371 375 371
 REA: .565
 BASELINE STRESS: 35 KSI
 AX. LOAD: 19775#
 CYCLES AT ~~TERMINATION~~/FAILURE: 1340, 675 L.P.S.
 2 Lives/_____

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400	0.3544	0.0007
35	14000	0.3557	0.0065
34	13600	0.2492	0.0026
33	13200	0.2066	0.0357
32	12800	0.1709	0.0259
31	12400	0.1455	0.0247
30	12000	0.1208	0.0167
29	11600	0.1041	0.0142
28	11200	0.0899	0.0130
27	10800	0.0769	0.0101
26	10400	0.0668	0.0084
25	10000	0.0584	0.0073
24	9600	0.0511	0.0061
23	9200	0.0450	0.0059
22	8800	0.0391	0.0098
21	8400	0.0343	0.0037
20	8000	0.0306	0.0035
19	7600	0.0271	0.0035
18	7200	0.0236	0.0030
17	6800	0.0206	0.0026
16	6400	0.0180	0.0025
15	6000	0.0155	0.0025
14	5600	0.0130	0.0020
13	5200	0.0110	0.0018
12	4800	0.0092	0.0017
11	4400	0.0075	0.0013
10	4000	0.0062	0.0012
9	3600	0.0050	0.0006
8	3200	0.0044	0.0004
7	2800	0.0040	0.0005
6	2400	0.0035	0.0004
5	2000	0.0031	0.0005
4	1600	0.0026	0.0005
3	1200	0.0021	0.0005
2	800	0.0016	
1	400		

1 Life

14,006.45 FLT-HRS.

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-4
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 ⑤
 VERAGE WIDTH: 1.499
 VERAGE THICKNESS: 362 370 367
 REA: .560
 BASELINE STRESS: 35 KSI
 AX. LOAD: 19,840 19,600#
 CYCLES AT TERMINATION/FAILURE: _____
 Static Load-27.9kH 2 Lives/_____

2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.09126	0.00877
39	15600	0.08249	0.00819
38	15200	0.07480	0.00758
37	14800	0.06672	0.00572
36	14400	0.06100	0.00423
35	14000	0.05677	0.00428
34	13600	0.05249	0.00437
33	13200	0.04812	0.00381
32	12800	0.04431	0.00353
31	12400	0.04078	0.00294
30	12000	0.03784	0.00294
29	11600	0.03490	0.00300
28	11200	0.03190	0.00278
27	10800	0.02912	0.00290
26	10400	0.02622	0.00254
25	10000	0.02368	0.00250
24	9600	0.02118	0.00243
23	9200	0.01875	0.00221
22	8800	0.01654	0.00210
21	8400	0.01444	0.00213
20	8000	0.01231	0.00189
19	7600	0.01052	0.00198
18	7200	0.00854	0.00168
17	6800	0.00686	0.00146
16	6400	0.00540	0.00107
15	6000	0.00433	0.00067
14	5600	0.00366	0.00077
13	5200	0.00289	0.00055
12	4800	0.00234	0.00057
11	4400	0.00177	0.00035
10	4000	0.00142	0.00033
9	3600	0.00109	0.00035
8	3200	0.00074	0.00035
7	2800	0.00039	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: GPF-5

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

VERAGE WIDTH: 1499

VERAGE THICKNESS: 368 370 368

REA: .560

ASELINE STRESS: 34 ksi

AX. LOAD: 19,040#

CYCLES AT TERMINATION/REMARKS:

2 Lives/
STATIC LOAD-27.9 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0982	.0096
39	15600	.0886	.0083
38	15200	.0803	.0059
37	14800	.0744	.0060
36	14400	.0684	.0054
35	14000	.0630	.0045
34	13600	.0585	.0046
33	13200	.0539	.0040
32	12800	.0499	.0039
31	12400	.0460	.0030
30	12000	.0430	.0033
29	11600	.0397	.0034
28	11200	.0363	.0026
27	10800	.0337	.0027
26	10400	.0310	.0026
25	10000	.0284	.0026
24	9600	.0258	.0025
23	9200	.0233	.0025
22	8800	.0208	.0028
21	8400	.0180	.0023
20	8000	.0157	.0022
19	7600	.0135	.0015
18	7200	.0120	.0019
17	6800	.0101	.0019
16	6400	.0082	.0012
15	6000	.0070	.0012
14	5600	.0058	.0010
13	5200	.0048	.0005
12	4800	.0043	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: GPF-6

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 ⑤

VERAGE WIDTH: 1495

VERAGE THICKNESS: 368 372 371

REA: .560

ASELINE STRESS: 34 ksi

AX. LOAD: 19,040#

CYCLES AT TERMINATION/REMARKS:

2 Lives/
STATIC LOAD-32.3 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.03735	.00288
39	15600	.03447	.00247
38	15200	.03200	.00218
37	14800	.02982	.00198
36	14400	.02784	.00216
35	14000	.02568	.00183
34	13600	.02385	.00261
33	13200	.02124	.00194
32	12800	.01930	.00172
31	12400	.01758	.00136
30	12000	.01622	.00147
29	11600	.01475	.00133
28	11200	.01342	.00128
27	10800	.01213	.00092
26	10400	.01121	.00101
25	10000	.01020	.00088
24	9600	.00932	.00082
23	9200	.00850	.00074
22	8800	.00786	.00099
21	8400	.00707	.00077
20	8000	.00630	.00066
19	7600	.00564	.00067
18	7200	.00497	.00044
17	6800	.00453	.00049
16	6400	.00404	.00051
15	6000	.00353	.00038
14	5600	.00315	.00045
13	5200	.00278	.00022
12	4800	.00248	.00027
11	4400	.00221	.00033
10	4000	.00188	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-7

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

VERAGE WIDTH: 1.499

VERAGE THICKNESS: 368 373 369

REA: .562

ASELINE STRESS: 34ksi

AX. LOAD: 19,108#

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 33.6 K#

2 Lives
 $\frac{a}{2c} = .46$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0046 / .0099	2c
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-31 [QPF-8]

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

VERAGE WIDTH: 1.499

VERAGE THICKNESS: 372 374 371

REA: 566

ASELINE STRESS: 34ksi [Sum of fact + 6,955 L.P. = 33,960 Psi] ZRW

AX. LOAD: 19,244

CYCLES AT TERMINATION/FAILURE: @ 14,938 L.P. - 79%

2 Lives/ _____

15606.37 FLT. HRS *

2 Lives
*

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.35267	.00317
39	15600	.34950	.00399
38	15200	.25556	.04869
37	14800	.20687	.03432
36	14400	.17255	.02823
35	14000	.14432	.02395
34	13600	.12037	.01946
33	13200	.10091	.01595
32	12800	.08486	.01266
31	12400	.07238	.00934
30	12000	.06296	.00819
29	11600	.05477	.00805
28	11200	.04672	.00565
27	10800	.04107	.00449
26	10400	.03658	.00380
25	10000	.03278	.00335
24	9600	.02843	.00420
23	9200	.02423	.00355
22	8800	.02068	.00284
21	8400	.01780	.00255
20	8000	.01525	.00230
19	7600	.01295	.00216
18	7200	.01079	.00189
17	6800	.00890	.00149
16	6400	.00741	.00138
15	6000	.00603	.00103
14	5600	.00500	.00083
13	5200	.00412	.00068
12	4800	.00344	.00063
11	4400	.00281	.00048
10	4000	.00233	.00049
9	3600	.00184	.00040
8	3200	.00144	.00038
7	2800	.00106	.00026
6	2400	.00086	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

55

FRAC TOG RAPH IC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-7
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 6
 AVERAGE WIDTH: 1.499
 AVERAGE THICKNESS: 3.68 3.73 3.69
 REA: .562
 BASELINE STRESS: 34ksi
 AX. LOAD: 19,108#
 CYCLES AT TERMINATION/FAILURE: _____
 2 Lives/
 STATIC LOAD - 33.6K#

2 Lives
 $\frac{2}{2} = .46$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0046	.0099
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-31 [QPF-8]
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5
 AVERAGE WIDTH: 1.499
 AVERAGE THICKNESS: 3.72 3.74 3.71
 REA: .566
 BASELINE STRESS: 34ksi [Sum for first 6,955SLP = 83.46 Psi] [200]
 AX. LOAD: 19,244
 CYCLES AT TERMINATION/FAILURE: @ 1,493,816 L.P. 6 - 79%
 2 Lives/
 15606.37 FLT. HRS*

2 Lives
*

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.35267	.00317
39	15600	.34950	.00391
38	15200	.25556	.04869
37	14800	.20687	.03432
36	14400	.17255	.02823
35	14000	.14432	.02395
34	13600	.12037	.01946
33	13200	.10091	.01595
32	12800	.08496	.01266
31	12400	.07239	.00934
30	12000	.06296	.00819
29	11600	.05477	.00803
28	11200	.04672	.00565
27	10800	.04107	.00449
26	10400	.03658	.00380
25	10000	.03278	.00435
24	9600	.02843	.00420
23	9200	.02423	.00355
22	8800	.02048	.00288
21	8400	.01780	.00255
20	8000	.01525	.00230
19	7600	.01295	.00216
18	7200	.01079	.00189
17	6800	.00890	.00149
16	6400	.00741	.00138
15	6000	.00603	.00103
14	5600	.00500	.00088
13	5200	.00412	.00068
12	4800	.00344	.00063
11	4400	.00281	.00048
10	4000	.00233	.00049
9	3600	.00184	.00040
8	3200	.00144	.00038
7	2800	.00106	.00026
6	2400	.00080	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPB-35 (QPF-9)

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 ⑤

VERAGE WIDTH: 1.499

VERAGE THICKNESS: 365 369 366

REA: .558 *Transverse 50,374 P.S.I. = 33,770 RSI*

ASELINE STRESS: 34 KSI

AX. LOAD: 18972 #

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____
STATIC LOAD - 30.7 K#

1 Life

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0427	.0042
39	15600	.0385	.0040
38	15200	.0345	.0038
37	14800	.0307	.0036
36	14400	.0271	.0029
35	14000	.0242	.0030
34	13600	.0202	.0026
33	13200	.0176	.0027
32	12800	.0149	.0020
31	12400	.0129	.0021
30	12000	.0108	.0019
29	11600	.0089	.0010
28	11200	.0079	.0008
27	10800	.0071	.0009
26	10400	.0062	.0010
25	10000	.0052	.0009
24	9600	.0043	.0005
23	9200	.0038	.0006
22	8800	.0032	.0003
21	8400	.0029	.0004
20	8000	.0025	.0004
19	7600	.0021	.0004
18	7200	.0017	.0004
17	6800	.0013	.0002
16	6400	.0010	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5

VERAGE WIDTH: 1.499

VERAGE THICKNESS: 367 373 369

REA: .560

ASELINE STRESS: 34 KSI

AX. LOAD: 19,040 #

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____
STATIC LOAD - 31.9 K#

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0335	.0025
39	15600	.0310	.0024
38	15200	.0286	.0025
37	14800	.0261	.0020
36	14400	.0241	.0022
35	14000	.0219	.0025
34	13600	.0194	.0023
33	13200	.0171	.0019
32	12800	.0152	.0018
31	12400	.0134	.0017
30	12000	.0117	.0019
29	11600	.0103	.0011
28	11200	.0092	.0011
27	10800	.0081	.0010
26	10400	.0071	.0010
25	10000	.0061	.0008
24	9600	.0053	.0006
23	9200	.0047	.0006
22	8800	.0041	.0005
21	8400	.0036	.0004
20	8000	.0032	.0004
19	7600	.0028	.0004
18	7200	.0024	.0004
17	6800	.0020	.0003
16	6400	.0017	.0003
15	6000	.0014	.0004
14	5600	.0010	.0002
13	5200	.0008	.0001
12	4800	.0007	.0002
11	4400	.0005	.0002
10	4000	.0003	.0002
9	3600	.0001	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-11

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 ⑤

ERAGE WIDTH: 1.504

ERAGE THICKNESS: 367 371 368

EA: .564

SELINE STRESS: 34 ksc

X. LOAD: 19,176 #

ANGLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD - 32.7 K#

2 Lives

$\%c = .38$

1 Life

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0102	29=.0266
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-12

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 : ⑥

ERAGE WIDTH: 1.503

ERAGE THICKNESS: 365 370 364

EA: .558

SELLAE STRESS: 34 ksc

X. LOAD: 18,972 #

ANGLES AT TERMINATION/_____

2 Lives/_____

2 Lives

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0413	.0033
39	15600	.0380	.0033
38	15200	.0347	.0031
37	14800	.0316	.0032
36	14400	.0284	.0024
35	14000	.0260	.0027
34	13600	.0233	.0028
33	13200	.0205	.0024
32	12800	.0181	.0021
31	12400	.0160	.0019
30	12000	.0141	.0019
29	11600	.0122	.0012
28	11200	.0110	.0017
27	10800	.0093	.0013
26	10400	.0080	.0010
25	10000	.0070	.0010
24	9600	.0060	.0009
23	9200	.0057	.0007
22	8800	.0042	.0007
21	8400	.0035	.0007
20	8000	.0030	.0005
19	7600	.0025	.0005
18	7200	.0021	.0004
17	6800	.0019	.0003
16	6400	.0016	.0002
15	6000	.0014	.0002
14	5600	.0012	.0002
13	5200	.0010	.0001
12	4800	.0009	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-13

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 4 5

ERAGE WIDTH: 1.501

ERAGE THICKNESS: 366 369 366

EA: .560

SELINE STRESS: 34 KSI

X. LOAD: 19,040#

LES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 29.7K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-14

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

ERAGE WIDTH: 1.498

ERAGE THICKNESS: 364 365 364

EA: .5535

SELINE STRESS: 34 KSI

X. LOAD: 18,819#

LES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 25.3K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0425	.0044
39	15600	.0381	.0033
38	15200	.0348	.0031
37	14800	.0317	.0028
36	14400	.0289	.0023
35	14000	.0266	.0022
34	13600	.0241	.0022
33	13200	.0222	.0022
32	12800	.0200	.0019
31	12400	.0181	.0017
30	12000	.0169	.0017
29	11600	.0147	.0016
28	11200	.0131	.0016
27	10800	.0115	.0014
26	10400	.0101	.0013
25	10000	.0088	.0013
24	9600	.0075	.0010
23	9200	.0065	.0006
22	8800	.0059	.0008
21	8400	.0051	.0006
20	8000	.0045	.0006
19	7600	.0039	.0007
18	7200	.0032	.0004
17	6800	.0028	.0004
16	6400	.0024	.0003
15	6000	.0021	.0003
14	5600	.0018	.0002
13	5200	.0016	.0003
12	4800	.0013	.0002
11	4400	.0011	.0001
10	4000	.0010	.0001
9	3600	.0009	.0002
8	3200	.0007	.0002
7	2800	.0006	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1509	.0162
39	15600	.1347	.0163
38	15200	.1184	.0112
37	14800	.1072	.0121
36	14400	.0951	.0095
35	14000	.0856	.0088
34	13600	.0768	.0074
33	13200	.0694	.0065
32	12800	.0629	.0057
31	12400	.0572	.0048
30	12000	.0524	.0041
29	11600	.0483	.0038
28	11200	.0445	.0040
27	10800	.0405	.0034
26	10400	.0371	.0027
25	10000	.0344	.0031
24	9600	.0313	.0029
23	9200	.0284	.0024
22	8800	.0260	.0028
21	8400	.0232	.0020
20	8000	.0212	.0022
19	7600	.0190	.0021
18	7200	.0169	.0018
17	6800	.0151	.0019
16	6400	.0132	.0019
15	6000	.0113	.0015
14	5600	.0098	.0016
13	5200	.0082	.0011
12	4800	.0071	.0009
11	4400	.0062	.0010
10	4000	.0052	.0007
9	3600	.0045	.0008
8	3200	.0037	.0007
7	2800	.0030	.0005
6	2400	.0025	.0005
5	2000	.0020	.0005
4	1600	.0015	.0003
3	1200	.0012	.0004
2	800	.0008	.0006
1	400	.0002	

58
62

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-15

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

VERAGE WIDTH: 1.499

VERAGE THICKNESS: 370 372 371

EA: .564

SELINE STRESS: 34ksc

AX. LOAD: 19176 #

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 29.9 K#

2 Lives

1 Life

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0481	.0039
39	15600	.0442	.0034
38	15200	.0403	.0035
37	14800	.0373	.0028
36	14400	.0345	.0026
35	14000	.0319	.0027
34	13600	.0292	.0023
33	13200	.0269	.0022
32	12800	.0247	.0024
31	12400	.0223	.0021
30	12000	.0202	.0021
29	11600	.0181	.0017
28	11200	.0164	.0015
27	10800	.0144	.0017
26	10400	.0132	.0014
25	10000	.0118	.0017
24	9600	.0101	.0018
23	9200	.0083	.0012
22	8800	.0071	.0010
21	8400	.0061	.0011
20	8000	.0050	.0009
19	7600	.0041	.0009
18	7200	.0032	.0007
17	6800	.0025	.0005
16	6400	.0020	.0005
15	6000	.0015	.0004
14	5600	.0011	.0001
13	5200	.0009	.0001
12	4800	.0009	.0001
11	4400	.0008	.0003
10	4000	.0005	.0002
9	3600	.0003	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-16

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5

VERAGE WIDTH: 1.498

VERAGE THICKNESS: 371 372 372

EA: .565

SELINE STRESS: 34ksc

AX. LOAD: 19,210 #

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 31.8 K#

2 Lives
%C=.25

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0392	.0033
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 8PC-17

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.497

AVERAGE THICKNESS: 371 371 371

AREA: .563

BASELINE STRESS: 34ksi

MAX. LOAD: 19,142*

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/_____

STATIC LOAD-25.0 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1552	.0199
39	15600	.1353	.0156
38	15200	.1197	.0144
37	14800	.1053	.0124
36	14400	.0929	.0101
35	14000	.0828	.0089
34	13600	.0739	.0074
33	13200	.0665	.0066
32	12800	.0599	.0059
31	12400	.0540	.0055
30	12000	.0485	.0045
29	11600	.0440	.0043
28	11200	.0397	.0037
27	10800	.0360	.0036
26	10400	.0324	.0031
25	10000	.0293	.0027
24	9600	.0266	.0030
23	9200	.0236	.0027
22	8800	.0209	.0026
21	8400	.0183	.0023
20	8000	.0160	.0025
19	7600	.0135	.0022
18	7200	.0113	.0018
17	6800	.0095	.0015
16	6400	.0080	.0011
15	6000	.0069	.0014
14	5600	.0055	.0009
13	5200	.0046	.0006
12	4800	.0040	.0007
11	4400	.0033	.0005
10	4000	.0028	.0007
9	3600	.0021	.0003
8	3200	.0018	.0003
7	2800	.0015	.0003
6	2400	.0012	.0002
5	2000	.0010	.0002
4	1600	.0008	.0002
3	1200	.0006	
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 8PC-18

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.497

AVERAGE THICKNESS: 369 371 369

AREA: .561

BASELINE STRESS: 34ksi

MAX. LOAD: 19,074*

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/_____

STATIC LOAD-27.8 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.06836	.00831
39	15600	.06005	.00636
38	15200	.05369	.00484
37	14800	.04885	.00435
36	14400	.04430	.00380
35	14000	.04070	.00388
34	13600	.03682	.00267
33	13200	.03415	.00270
32	12800	.03145	.00268
31	12400	.02877	.00233
30	12000	.02644	.00251
29	11600	.02393	.00219
28	11200	.02174	.00210
27	10800	.01964	.00193
26	10400	.01771	.00176
25	10000	.01595	.00177
24	9600	.01418	.00155
23	9200	.01263	.00143
22	8800	.01120	.00090
21	8400	.01030	.00147
20	8000	.00883	.00100
19	7600	.00783	.00098
18	7200	.00685	.00076
17	6800	.00609	.00102
16	6400	.00507	.00052
15	6000	.00455	.00071
14	5600	.00384	.00056
13	5200	.00328	.00045
12	4800	.00283	.00051
11	4400	.00232	.00053
10	4000	.00179	.00038
9	3600	.00141	.00021
8	3200	.00120	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

$\%a = .26$

SPECIMEN NUMBER: QPF-19

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5

VERAGE WIDTH: 1.500

VERAGE THICKNESS: 371 372 371

REA: .557

BASELINE STRESS: 34 KSI $\alpha = 984$

AX. LOAD: 1893F $A = 7.58$

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 32.5 KH

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0259 / .1005	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-20

SPECTRUM: Fighter

TEST DATE: 1.500

TEST FRAME: (1) 2 3 4 5

AVERAGE WIDTH: .88

AVERAGE THICKNESS: 369 371 371

AREA: .563

BASELINE STRESS: 34 KSI $\alpha = 41.8$

MAX. LOAD: 1942 $A = 7.46$

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 30.5 KH

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.07827	.00600
39	15600	.07227	.00527
38	15200	.06700	.00512
37	14800	.06188	.00468
36	14400	.05720	.00420
35	14000	.05300	.00387
34	13600	.04911	.00349
33	13200	.04562	.00318
32	12800	.04244	.00314
31	12400	.03930	.00301
30	12000	.03629	.00273
29	11600	.03357	.00223
28	11200	.03134	.00238
27	10800	.02896	.00144
26	10400	.02752	.00287
25	10000	.02465	.00207
24	9600	.02358	.00204
23	9200	.02054	.00167
22	8800	.01885	.00167
21	8400	.01716	.00166
20	8000	.01550	.00175
19	7600	.01375	.00153
18	7200	.01222	.00115
17	6800	.01107	.00132
16	6400	.00975	.00138
15	6000	.00837	.00127
14	5600	.00710	.00112
13	5200	.00598	.00103
12	4800	.00495	.00094
11	4400	.00401	.00079
10	4000	.00322	.00067
9	3600	.00235	.00058
8	3200	.00197	.00042
7	2800	.00135	.00037
6	2400	.00118	.00035
5	2000	.00083	.00025
4	1600	.00058	
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 08F-21

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (6)

AVERAGE WIDTH: 1.496

AVERAGE THICKNESS: 371 37 367

AREA: .562

BASILINE STRESS: 34KSI al = 9.7

MAX. LOAD: 10108 A = 764

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD - 29.7 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.05769	.00450
39	15600	.05319	.00485
38	15200	.04834	.00409
37	14800	.04425	.00389
36	14400	.0403	.00338
35	14000	.03698	.00358
34	13600	.03340	.00327
33	13200	.03013	.00272
32	12800	.02741	.00319
31	12400	.02422	.00283
30	12000	.02139	.00257
29	11600	.01882	.00252
28	11200	.01630	.00121
27	10800	.01509	.00225
26	10400	.01284	.00159
25	10000	.01125	.00145
24	9600	.00980	.00152
23	9200	.00828	.00110
22	8800	.00718	.00106
21	8400	.00612	.00075
20	8000	.00537	.00072
19	7600	.00455	.00058
18	7200	.00397	.00058
17	6800	.00339	.00044
16	6400	.00295	.00037
15	6000	.00258	.00035
14	5600	.00223	.00028
13	5200	.00195	.00027
12	4800	.00168	.00025
11	4400	.00140	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

$\sigma_{lc} = .16$

SPECIMEN NUMBER: 08F-22

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (1) 2 3 4 5 (6)

AVERAGE WIDTH: 1.497

AVERAGE THICKNESS: 372 372 371

AREA: .564

BASILINE STRESS: 34KSI al = 9.78

MAX. LOAD: 19176 A = 767

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD - 30.9 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0326 / .2059	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

$$a/c = .12$$

SPECIMEN NUMBER: 9PF-23

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5

AVERAGE WIDTH: 1498

AVERAGE THICKNESS: 371 372 370

AREA: .563

BASILINE STRESS: 34 KSI

MAX. LOAD: 19142 A = 7.66

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD - 31.2 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0353	.2894
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 9PF-24

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 (3) 4 5 (5)

AVERAGE WIDTH: 1499

AVERAGE THICKNESS: 370 371 371

AREA: .563

BASILINE STRESS: 34 KSI

MAX. LOAD: 19142 A = 7.66

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD - 33.2 K#

$$a/c = .41$$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0113	.0276
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

(23)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: AP-25

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (1) 2 3 4 5

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: 371 372 371

AREA: .563

BASELINE STRESS: 34 KSI

MAX. LOAD: 19,142 #

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 27.1 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.15150	.01475
39	15600	.13675	.01345
38	15200	.12330	.01275
37	14800	.11055	.01104
36	14400	.09931	.00957
35	14000	.08994	.00803
34	13600	.08091	.00811
33	13200	.07280	.00677
32	12800	.06603	.00619
31	12400	.05984	.00529
30	12000	.05455	.00502
29	11600	.04953	.00446
28	11200	.04507	.00413
27	10800	.04094	.00317
26	10400	.03777	.00315
25	10000	.03462	.00332
24	9600	.03130	.00316
23	9200	.02814	.00262
22	8800	.02552	.00290
21	8400	.02262	.00260
20	8000	.02002	.00254
19	7600	.01743	.00257
18	7200	.01491	.00214
17	6800	.01277	.00222
16	6400	.01055	.00203
15	6000	.00852	.00185
14	5600	.00667	.00162
13	5200	.00505	.00139
12	4800	.00366	.00091
11	4400	.00275	.00068
10	4000	.00207	.00053
9	3600	.00154	.00039
8	3200	.00115	.00032
7	2800	.00083	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: AP-26

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 (3) 4 5 (70)

AVERAGE WIDTH: 1.498

AVERAGE THICKNESS: 367 370 369

AREA: .560

BASELINE STRESS: 34 KSI $\omega = 99.7$

MAX. LOAD: 19040 A = 7.62

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 28.4 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.10169	.01069
39	15600	.09100	.00975
38	15200	.08125	.00924
37	14800	.07201	.00821
36	14400	.06380	.00652
35	14000	.05725	.00594
34	13600	.05134	.00523
33	13200	.04611	.00541
32	12800	.04170	.00367
31	12400	.03793	.00338
30	12000	.03455	.00302
29	11600	.03153	.00316
28	11200	.02837	.00279
27	10800	.02558	.00277
26	10400	.02281	.00253
25	10000	.02028	.00218
24	9600	.01810	.00202
23	9200	.01608	.00168
22	8800	.01440	.00160
21	8400	.01280	.00150
20	8000	.01130	.00140
19	7600	.00990	.00104
18	7200	.00886	.00114
17	6800	.00772	.00097
16	6400	.00675	.00095
15	6000	.00580	.00105
14	5600	.00475	.00087
13	5200	.00388	.00068
12	4800	.00320	.00056
11	4400	.00264	.00058
10	4000	.00206	.00044
9	3600	.00162	.00037
8	3200	.00127	.00036
7	2800	.00091	.00014
6	2400	.00077	.00018
5	2000	.00059	
4	1600		
3	1200		
2	800		
1	400		

(64)

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: Q PF-27

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1498

AVERAGE THICKNESS: 370 374 371

AREA: 565

BASELINE STRESS: 34 KSC

MAX. LOAD: 19,210 #

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD-33.1K#

No crack was found after 2-Lives Since this Bolt hole was not reamed leaving the hole under size. The bolt was driven in by the shop mechanic which resulted in putting a compressive load on the bolt hole and cold working the hole to some extent. Therefore, fatigue initiation was retarded.

ZR Wdamsky
Dr. von Wdt

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: Q1F-28

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: 1 2 3- (4) 5 (R:)

AVERAGE WIDTH: 1.498

AVERAGE THICKNESS: _____ 367 372 368

AREA: 560

BASELINE STRESS: 34 ksc $\eta = 95.0$

MAX. LOAD: 19040 A: 7.62

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 30.8 kN

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.00000	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		
Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.04540	.00455
39	15600	.04085	.00277
38	15200	.03808	.00310
37	14800	.03498	.00377
36	14400	.03121	.00307
35	14000	.02814	.00256
34	13600	.02558	.00252
33	13200	.02306	.00286
32	12800	.02020	.00238
31	12400	.01782	.00221
30	12000	.01561	.00251
29	11600	.01311	.00173
28	11200	.01138	.00171
27	10800	.00967	.00136
26	10400	.00831	.00127
25	10000	.00704	.00101
24	9600	.00603	.00101
23	9200	.00502	.00092
22	8800	.00410	.00080
21	8400	.00330	.00060
20	8000	.00270	.00062
19	7600	.00208	.00060
18	7200	.00148	.00048
17	6800	.00100	
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

$\sigma_c = .18$

SPECIMEN NUMBER: 8PF-29

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (1516)

AVERAGE WIDTH: 1497

AVERAGE THICKNESS: 366 368 357

AREA: .557

BASILINE STRESS: 34 ksc ($\sigma_c = .97.8$)

MAX. LOAD: 18938 A = 758

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 32.5 K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 8PF-30

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1500

AVERAGE THICKNESS: 366 370 370

AREA: .552

BASILINE STRESS: 34 ksc

MAX. LOAD: 18,768#

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 25.1 K#

Zero. At Base of Sliver

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0217 / .1184	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.12628	.01428
39	15600	.11200	.01323
38	15200	.09877	.01089
37	14800	.08788	.00948
36	14400	.07840	.00826
35	14000	.07014	.00695
34	13600	.06319	.00599
33	13200	.05720	.00491
32	12800	.05229	.00471
31	12400	.04758	.00402
30	12000	.04356	.00376
29	11600	.03980	.00329
28	11200	.03659	.00271
27	10800	.03338	.00270
26	10400	.03118	.00272
25	10000	.02846	.00266
24	9600	.02580	.00231
23	9200	.02349	.00258
22	8800	.02091	.00234
21	8400	.01857	.00197
20	8000	.01660	.00211
19	7600	.01449	.00189
18	7200	.01260	.00175
17	6800	.01085	.00165
16	6400	.00920	.00151
15	6000	.00769	.00135
14	5600	.00634	.00095
13	5200	.00539	.00095
12	4800	.00444	.00072
11	4400	.00372	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-31

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 END

AVERAGE WIDTH: 1.561

AVERAGE THICKNESS: 3.65 3.69 3.65

AREA: .557

BASELINE STRESS: 34 KSI ref: 95.5

MAX. LOAD: 18,870 18,930 A = 7.58

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 29.7 K#

2 Lives

FRACIOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.09233	.00758
39	15600	.08475	.00616
38	15200	.07859	.00624
37	14800	.07235	.00539
36	14400	.06705	.00509
35	14000	.06196	.00450
34	13600	.05746	.00411
33	13200	.05335	.00439
32	12800	.04846	.00346
31	12400	.04550	.00322
30	12000	.04227	.00303
29	11600	.03925	.00275
28	11200	.03650	.00256
27	10800	.03394	.00259
26	10400	.03135	.00247
25	10000	.02888	.00243
24	9600	.02645	.00220
23	9200	.02425	.00212
22	8800	.02213	.00197
21	8400	.02015	.00207
20	8000	.01808	.00185
19	7600	.01623	.00186
18	7200	.01437	.00172
17	6800	.01265	.00133
16	6400	.01132	.00157
15	6000	.00981	.00136
14	5600	.00843	.00133
13	5200	.00710	.00140
12	4800	.00570	.00101
11	4400	.00469	.00097
10	4000	.00372	.00074
9	3600	.00298	.00063
8	3200	.00235	.00055
7	2800	.00180	.00041
6	2400	.00139	.00036
5	2000	.00103	.00028
4	1600	.00075	
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-32

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

ERAGE WIDTH: 1.560

ERAGE THICKNESS: 3.64 3.65 3.64

EA: .556

SELINE STRESS: 32 KSI

X. LOAD: 18,870

CLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 30.6 K#

2 Lives
a/c = .16

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.04052	.00374
39	15600	.03672	.00311
38	15200	.03367	.00256
37	14800	.03061	.00270
36	14400	.02741	.00246
35	14000	.02545	.00245
34	13600	.02300	.00221
33	13200	.02074	.00189
32	12800	.01890	.00178
31	12400	.01712	.00151
30	12000	.01561	.00143
29	11600	.01417	.00128
28	11200	.01290	.00105
27	10800	.01185	.00121
26	10400	.01064	.00096
25	10000	.00968	.00100
24	9600	.00868	.00096
23	9200	.00772	.00095
22	8800	.00677	.00073
21	8400	.00604	.00083
20	8000	.00521	.00060
19	7600	.00461	.00055
18	7200	.00406	.00049
17	6800	.00357	.00047
16	6400	.00310	.00038
15	6000	.00272	.00037
14	5600	.00235	.00031
13	5200	.00204	.00022
12	4800	.00182	.00013
11	4400	.00164	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FRACTOGRAPHIC DATA:

FATIGUE TEST DATA

2 Lives

$a_2 = .23$

SPECIMEN NUMBER: QPF-33

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 (4) 5

AVERAGE WIDTH: 1.562

AVERAGE THICKNESS: 367 370 367

AREA: .561

BASLINE STRESS: 34 KSI

MAX. LOAD: 19,074 #

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD-32.6 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0226	.0979
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-34

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 (5) (R16)

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: 366 370 367

AREA: .558

BASLINE STRESS: 34 KSI

$a_1 = .976$

MAX. LOAD: 12,972 $A = 754$

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD-28.2 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.07357	.06719
39	15600	.06640	.00572
38	15200	.06068	.00507
37	14800	.05561	.00477
36	14400	.05084	.00429
35	14000	.04655	.00389
34	13600	.04266	.00367
33	13200	.03899	.00313
32	12800	.03586	.00277
31	12400	.03309	.00249
30	12000	.03060	.00268
29	11600	.02792	.00241
28	11200	.02551	.00244
27	10800	.02307	.00209
26	10400	.02098	.00221
25	10000	.01877	.00185
24	9600	.01692	.00183
23	9200	.01509	.00162
22	8800	.01347	.00158
21	8400	.01189	.00147
20	8000	.01042	.00152
19	7600	.00890	.00130
18	7200	.00760	.00083
17	6800	.00677	.00091
16	6400	.00586	.00085
15	6000	.00501	.00081
14	5600	.00420	.00049
13	5200	.00371	.00076
12	4800	.00295	.00057
11	4400	.00238	.00030
10	4000	.00208	.00037
9	3600	.00171	.00031
8	3200	.00140	.00045
7	2800	.00095	.00018
6	2400	.00087	
5	2000	.00062	
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 9PF-35
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 (R17)
 AVERAGE WIDTH: 1498
 AVERAGE THICKNESS: 363 369 361
 AREA: .564
 BASELINE STRESS: 34 KSI $\omega = 20.1$
 MAX. LOAD: 18834 $A = 7.57$
 CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 22.8 K#

FRACTOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.18957	.02169
39	15600	.16788	.02135
38	15200	.14653	.01837
37	14800	.12316	.01489
36	14400	.11327	.00597
35	14000	.10730	.01734
34	13600	.08996	.01921
33	13200	.07975	.00815
32	12800	.07160	.05670
31	12400	.06490	.00579
30	12000	.05911	.00547
29	11600	.05364	.00470
28	11200	.04894	.00372
27	10800	.04572	.00317
26	10400	.04155	.00339
25	10000	.03816	.00341
24	9600	.03475	.00283
23	9200	.03192	.00272
22	8800	.02920	.00300
21	8400	.02626	.00265
20	8000	.02355	.00281
19	7600	.02074	.00272
18	7200	.01902	.00242
17	6800	.01560	.00245
16	6400	.01315	.00201
15	6000	.01114	.00153
14	5600	.00951	.00138
13	5200	.00813	.00114
12	4800	.00699	.00099
11	4400	.00600	.00081
10	4000	.00519	.00086
9	3600	.00433	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 9PF-36
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: (1) 2 3 4 5 (20)
 AVERAGE WIDTH: 1561
 AVERAGE THICKNESS: 372 375 371
 AREA: .567
 BASELINE STRESS: 34 KSI $\omega = 47.5$
 MAX. LOAD: 19275 $A = 7.71$
 CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - 29.3 K#

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.07475	.0034
39	15600	.06841	.00519
38	15200	.06322	.00475
37	14800	.05847	.00410
36	14400	.05437	.00370
35	14000	.05067	.00357
34	13600	.04710	.00350
33	13200	.04360	.00318
32	12800	.04042	.00292
31	12400	.03750	.00283
30	12000	.03467	.00257
29	11600	.03210	.00249
28	11200	.02961	.00261
27	10800	.02760	.00244
26	10400	.02456	.00195
25	10000	.02261	.00196
24	9600	.02065	.00171
23	9200	.01894	.00194
22	8800	.01700	.00187
21	8400	.01513	.00167
20	8000	.01346	.00177
19	7600	.01169	.00161
18	7200	.01008	.00194
17	6800	.00819	.00119
16	6400	.00695	.00169
15	6000	.00526	.00110
14	5600	.00416	.00089
13	5200	.00327	.00062
12	4800	.00265	.00053
11	4400	.00212	.00052
10	4000	.00160	.00037
9	3600	.00133	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-37

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 (5)

AVERAGE WIDTH: 1.501

AVERAGE THICKNESS: 371 371 370

AREA: .514

BASELINE STRESS: 34ksi

MAX. LOAD: 19,176#

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - ~~23.1~~ K#
30.4 K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QPF-38

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (6)

AVERAGE WIDTH: 1.500

AVERAGE THICKNESS: 367 368 368

AREA: .560

BASELINE STRESS: 34ksi

MAX. LOAD: 19,040#

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 18.8 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.07598	.00616
39	15600	.06982	.00610
38	15200	.06372	.00532
37	14800	.05840	.00447
36	14400	.05393	.00385
35	14000	.05008	.00398
34	13600	.04610	.00406
33	13200	.04204	.00376
32	12800	.03828	.00331
31	12400	.03497	.00289
30	12000	.03209	.00289
29	11600	.02920	.00271
28	11200	.02649	.00215
27	10800	.02434	.00216
26	10400	.02218	.00168
25	10000	.02050	.00204
24	9600	.01846	.00167
23	9200	.01679	.00168
22	8800	.01511	.00161
21	8400	.01350	.00138
20	8000	.01212	.00133
19	7600	.01079	.00119
18	7200	.00960	.00096
17	6800	.00864	.00111
16	6400	.00751	.00094
15	6000	.00652	.00093
14	5600	.00554	.00080
13	5200	.00479	.00057
12	4800	.00422	.00060
11	4400	.00362	.00054
10	4000	.00308	.00045
9	3600	.00263	.00053
8	3200	.00210	.00055
7	2800	.00155	.00047
6	2400	.00108	.00034
5	2000	.00074	.00015
4	1600	.00059	
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.29551	.03943
39	15600	.25608	.03152
38	15200	.22456	.02386
37	14800	.20070	.02070
36	14400	.18000	.01721
35	14000	.16279	.01500
34	13600	.14779	.01317
33	13200	.13462	.01240
32	12800	.12222	.00986
31	12400	.11236	.00961
30	12000	.10275	.00899
29	11600	.09376	.00913
28	11200	.08463	.00836
27	10800	.07627	.00775
26	10400	.06852	.00609
25	10000	.06243	.00470
24	9600	.05753	.00504
23	9200	.05249	.00436
22	8800	.04814	.00389
21	8400	.04425	.00328
20	8000	.04097	.00326
19	7600	.03771	.00336
18	7200	.03435	.00305
17	6800	.03130	.00291
16	6400	.02849	.00279
15	6000	.02570	.00270
14	5600	.02300	.00278
13	5200	.02022	.00229
12	4800	.01793	.00258
11	4400	.01535	.00231
10	4000	.01304	.00232
9	3600	.01072	.00249
8	3200	.00823	.00245
7	2800	.00678	.00180
6	2400	.00498	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2.1.6 QIF
FATIGUE TEST DATA

SPECIMEN NUMBER: QIF-1
SPECTRUM: Fighter
TEST DATE: _____
TEST FRAME: 1 2 3 (4) 5
ERAGE WIDTH: 1.497
ERAGE THICKNESS: 377 378 376
EA: .564
BASELINE STRESS: 34ks (G-944)
X. LOAD: 19176 1:767
CLES AT TERMINATION/FAILURE:
2 Lives/_____
STATIC LOAD - 29.1 K#

FATIGUE TEST DATA

SPECIMEN NUMBER: QIF-2
SPECTRUM: Fighter
TEST DATE: _____
TEST FRAME: (1) 2 3 4 5
ERAGE WIDTH: 1.500
ERAGE THICKNESS: 377 378 375
EA: .566
BASELINE STRESS: 34ks
X. LOAD: 19,244#
CLES AT TERMINATION/FAILURE:
2 Lives/_____
STATIC LOAD - 31.4 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.09695	.00740
39	15600	.08955	.00743
38	15200	.08212	.00662
37	14800	.07550	.00550
36	14400	.07000	.00499
35	14000	.06501	.00471
34	13600	.06030	.00440
33	13200	.05590	.00383
32	12800	.05207	.00360
31	12400	.04847	.00322
30	12000	.04525	.00315
29	11600	.04210	.00310
28	11200	.03900	.00259
27	10800	.03641	.00243
26	10400	.03398	.00213
25	10000	.03185	.00214
24	9600	.02971	.00225
23	9200	.02746	.00226
22	8800	.02520	.00215
21	8400	.02305	.00215
20	8000	.02090	.00187
19	7600	.01903	.00178
18	7200	.01725	.00169
17	6800	.01556	.00166
16	6400	.01396	.00127
15	6000	.01269	.00125
14	5600	.01144	.00150
13	5200	.00994	.00104
12	4800	.00890	.00100
11	4400	.00768	.00126
10	4000	.00642	.00119
9	3600	.00523	.00096
8	3200	.00427	.00081
7	2800	.00346	.00072
6	2400	.00274	.00060
5	2000	.00214	.00052
4	1600	.00162	.00047
3	1200	.00115	
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.02817	.00269
39	15600	.02548	.00195
38	15200	.02353	.00172
37	14800	.02181	.00166
36	14400	.02015	.00159
35	14000	.01856	.00159
34	13600	.01697	.00142
33	13200	.01555	.00136
32	12800	.01419	.00128
31	12400	.01291	.00123
30	12000	.01168	.00108
29	11600	.01060	.00115
28	11200	.00945	.00089
27	10800	.00856	.00086
26	10400	.00776	.00093
25	10000	.00677	.00072
24	9600	.00605	.00089
23	9200	.00516	.00062
22	8800	.00454	.00054
21	8400	.00400	.00039
20	8000	.00361	.00049
19	7600	.00312	.00034
18	7200	.00278	.00039
17	6800	.00239	.00034
16	6400	.00205	.00027
15	6000	.00178	.00020
14	5600	.00158	.00021
13	5200	.00137	.00012
12	4800	.00125	.00022
11	4400	.00103	.00008
10	4000	.00095	.00016
9	3600	.00079	.00014
8	3200	.00065	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-3

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 ⑤

AVERAGE WIDTH: 1.501

AVERAGE THICKNESS: 377 378 378

KA: .567

BASELINE STRESS: 34 ksc

MAX. LOAD: 19278#

CONDITIONS AT TERMINATION/FAILURE:

2 Lives/1.531,494 L.P.
STATIC LOAD - 31.4 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.04738	.00380
39	15600	.04358	.00341
38	15200	.04017	.00293
37	14800	.03724	.00266
36	14400	.03458	.00261
35	14000	.03197	.00242
34	13600	.02955	.00224
33	13200	.02731	.00219
32	12800	.02512	.00212
31	12400	.02300	.00197
30	12000	.02103	.00205
29	11600	.01898	.00184
28	11200	.01714	.00173
27	10800	.01541	.00156
26	10400	.01385	.00145
25	10000	.01240	.00132
24	9600	.01108	.00119
23	9200	.00989	.00110
22	8800	.00879	.00108
21	8400	.00761	.00090
20	8000	.00671	.00089
19	7600	.00582	.00065
18	7200	.00517	.00062
17	6800	.00455	.00059
16	6400	.00396	.00033
15	6000	.00363	.00043
14	5600	.00320	.00035
13	5200	.00285	.00051
12	4800	.00234	.00025
11	4400	.00209	.00039
10	4000	.00170	.00027
9	3600	.00143	.00017
8	3200	.00126	.00019
7	2800	.00107	.00011
6	2400	.00096	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-4

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑥

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: 376 379 378

KA: .566

BASELINE STRESS: 34 ksc

MAX. LOAD: 19,244#

CONDITIONS AT TERMINATION/FAILURE:

2 Lives/1.531,494 L.P.
STATIC LOAD - 28.0 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.10291	.01004
39	15600	.09287	.00959
38	15200	.08328	.00832
37	14800	.07496	.00755
36	14400	.06741	.00696
35	14000	.06045	.00688
34	13600	.05457	.00540
33	13200	.04917	.00475
32	12800	.04442	.00427
31	12400	.04025	.00362
30	12000	.03663	.00354
29	11600	.03309	.00328
28	11200	.02981	.00299
27	10800	.02690	.00250
26	10400	.02440	.00230
25	10000	.02210	.00222
24	9600	.01988	.00182
23	9200	.01806	.00166
22	8800	.01640	.00148
21	8400	.01492	.00142
20	8000	.01350	.00138
19	7600	.01212	.00127
18	7200	.01085	.00128
17	6800	.00957	.00117
16	6400	.00840	.00109
15	6000	.00731	.00117
14	5600	.00614	.00109
13	5200	.00505	.00104
12	4800	.00401	.00094
11	4400	.00307	.00079
10	4000	.00228	.00072
9	3600	.00156	.00033
8	3200	.00123	.00024
7	2800	.00099	.00022
6	2400	.00077	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: QIF-5
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 ④ 5
 AVERAGE WIDTH: 1.499
 AVERAGE THICKNESS: 325 328 326
 AREA: 564
 BASELINE STRESS: 34Ksc
 X. LOAD: 19,176#
 Cycles AT TERMINATION/FAILURE:
 2 Lives/
 STATIC LOAD-32.4 K#

2 Lives

1 Life

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.02220	.00282
39	15600	.01938	.00180
38	15200	.01758	.00165
37	14800	.01593	.00149
36	14400	.01444	.00156
35	14000	.01288	.00116
34	13600	.01172	.00127
33	13200	.01045	.00119
32	12800	.00926	.00112
31	12400	.00814	.00096
30	12000	.00718	.00088
29	11600	.00630	.00075
28	11200	.00555	.00067
27	10800	.00488	.00058
26	10400	.00430	.00051
25	10000	.00379	.00039
24	9600	.00340	.00037
23	9200	.00303	.00021
22	8800	.00282	.00030
21	8400	.00252	.00025
20	8000	.00227	.00026
19	7600	.00201	.00027
18	7200	.00174	.00022
17	6800	.00152	.00019
16	6400	.00133	.00021
15	6000	.00112	.00013
14	5600	.00099	.00019
13	5200	.00080	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: QIF-6
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5
 AVERAGE WIDTH: 1.500
 AVERAGE THICKNESS: 378 381 381
 AREA: 569
 BASELINE STRESS: 34Ksc
 X. LOAD: 19,346#
 Cycles AT TERMINATION/FAILURE:
 2 Lives/
 STATIC LOAD-31.1 K#

2 Lives

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.04030	.00380
39	15600	.03650	.00373
38	15200	.03277	.00308
37	14800	.02969	.00303
36	14400	.02666	.00278
35	14000	.02388	.00296
34	13600	.02092	.00264
33	13200	.01828	.00251
32	12800	.01577	.00217
31	12400	.01360	.00192
30	12000	.01168	.00181
29	11600	.00987	.00167
28	11200	.00820	.00111
27	10800	.00709	.00077
26	10400	.00632	.00087
25	10000	.00545	.00087
24	9600	.00458	.00076
23	9200	.00382	.00061
22	8800	.00321	.00044
21	8400	.00277	.00058
20	8000	.00219	.00037
19	7600	.00182	.00028
18	7200	.00154	.00019
17	6800	.00135	.00012
16	6400	.00123	.00018
15	6000	.00105	.00022
14	5600	.00083	.00011
13	5200	.00072	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-7

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: .375 .377 .372

SEA: .561

BASELINE STRESS: 34ksi

A. LOAD: 19074#

CONDITIONS AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 29.8 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.07496	.00678
39	15600	.06818	.00674
38	15200	.06144	.00565
37	14800	.05579	.00482
36	14400	.05097	.00455
35	14000	.04642	.00446
34	13600	.04196	.00386
33	13200	.03810	.00358
32	12800	.03452	.00322
31	12400	.03130	.00327
30	12000	.02702	.00313
29	11600	.02310	.00303
28	11200	.02187	.00264
27	10800	.01923	.00247
26	10400	.01671	.00225
25	10000	.01451	.00214
24	9600	.01237	.00169
23	9200	.01068	.00149
22	8800	.00919	.00130
21	8400	.00789	.00104
20	8000	.00665	.00130
19	7600	.00555	.00085
18	7200	.00470	.00059
17	6800	.00411	.00059
16	6400	.00352	.00049
15	6000	.00303	.00053
14	5600	.00250	.00068
13	5200	.00182	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

9/12 = .12

SPECIMEN NUMBER: QIF-8

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: .373 .376 .375

SEA: .561

BASELINE STRESS: 34ksi

A. LOAD: 19074 A = 7.63 Cal: 94.9

CONDITIONS AT TERMINATION/FAILURE:

2 Lives/ 1,531,494 LP

STATIC LOAD - 32.8 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0208	.2894
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-9

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

CRACK WIDTH: 1.499

CRACK THICKNESS: 372 375 373

SEA: .560

BASELINE STRESS: 34Ksc $\sigma_c = 972$

MAX. LOAD: 19046 A-76W

1 Life

CRACKS AT TERMINATION/FAILURE:

2 Lives/ 1531994

STATIC LOAD - 32.8 K#

$\sigma_c = .20$

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

CRACK WIDTH: 1.500

CRACK THICKNESS: 373 375 374

SEA: .561

BASELINE STRESS: 34Ksc $\sigma_c = 979$

MAX. LOAD: 19074 A-76W

1 Life

CRACKS AT TERMINATION/FAILURE:

2 Lives/ 1531494

STATIC LOAD - 33.1 K#

$\sigma_c = .49$

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0168	29+.08421
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0058	29+.0117
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRAC TOG RAPH IC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-11
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 (5)
 AVERAGE WIDTH: 1.501
 AVERAGE THICKNESS: 373 375 374
 GRA: .563
 BASELINE STRESS: 34 KSC Cal: 967
 MAX. LOAD: 19102 A: 766
 Cycles AT TERMINATION/FAILURE:
 2 Lives/ _____
 STATIC LOAD - 32.6 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.04510	.00377
39	15600	.04133	.00260
38	15200	.03873	.00250
37	14800	.03623	.00243
36	14400	.03380	.00227
35	14000	.03153	.00225
34	13600	.02928	.00220
33	13200	.02708	.00211
32	12800	.02497	.00207
31	12400	.02290	.00193
30	12000	.02097	.00182
29	11600	.01915	.00171
28	11200	.01744	.00144
27	10800	.01600	.00144
26	10400	.01456	.00118
25	10000	.01338	.00120
24	9600	.01218	.00108
23	9200	.01110	.00050
22	8800	.01060	.00150
21	8400	.00910	.00093
20	8000	.00817	.00089
19	7600	.00728	.00090
18	7200	.00638	.00068
17	6800	.00570	.00074
16	6400	.00496	.00054
15	6000	.00442	.00056
14	5600	.00386	.00038
13	5200	.00348	.00038
12	4800	.00309	.00044
11	4400	.00265	.00030
10	4000	.00235	.00034
9	3600	.00201	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

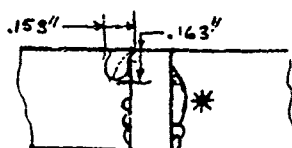
FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-12
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 (6)
 AVERAGE WIDTH: 1.500
 AVERAGE THICKNESS: 374 377 376
 GRA: .563
 BASELINE STRESS: 34 KSC Cal: 965
 MAX. LOAD: 19102 A: 766
 Cycles AT TERMINATION/FAILURE:
 2 Lives/ _____
 STATIC LOAD - 29.2 K#

Blk #	FLIGHT HRS.	CRACK LENGTH* IN.	INCREMENT IN.
40	16000	.05318	.00445
39	15600	.04873	.00465
38	15200	.04408	.00393
37	14800	.04015	.00339
36	14400	.03666	.00288
35	14000	.03378	.00237
34	13600	.03141	.00241
33	13200	.02900	.00227
32	12800	.02672	.00214
31	12400	.02458	.00223
30	12000	.02235	.00215
29	11600	.02020	.00217
28	11200	.01813	.00182
27	10800	.01631	.00171
26	10400	.01460	.00138
25	10000	.01322	.00157
24	9600	.01165	.00119
23	9200	.01046	.00123
22	8800	.00973	.00121
21	8400	.00892	.00114
20	8000	.00888	.00123
19	7600	.00865	.00077
18	7200	.00838	.00075
17	6800	.00813	
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life



FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: QIF-13

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 ④⑩

CRACK WIDTH: 1.498

CRACK THICKNESS: 373 378 373

SEA: .561

BASELINE STRESS: 34ksc (at 42.5 (78 km)

AX. LOAD: 19074 A:763

1 Life

CRACKS AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 29.6kN

FRACTOGRAPHIC DATA

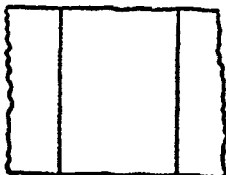
Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	09024	00835
39	15600	08189	00714
38	15200	07475	00700
37	14800	06775	00631
36	14400	06144	00483
35	14000	05461	00491
34	13600	05170	00429
33	13200	04741	00367
32	12800	04374	00309
31	12400	04063	00335
30	12000	03730	00288
29	11600	03442	00274
28	11200	03168	00278
27	10800	02890	00258
26	10400	02632	00253
25	10000	02379	00255
24	9600	02124	00237
23	9200	01887	00212
22	8800	01675	00205
21	8400	01470	00182
20	8000	01288	00164
19	7600	01124	00144
18	7200	00980	00147
17	6800	00833	00133
16	6400	00700	00105
15	6000	00595	00107
14	5600	00488	00107
13	5200	00381	00066
12	4800	00315	00055
11	4400	00260	00029
10	4000	00231	00042
9	3600	00189	00042
8	3200	00147	00024
7	2800	00123	00035
6	2400	00088	00033
5	2000	00065	
4	1600		
3	1200		
2	800		
1	400		

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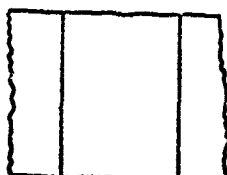
2.1.7 QPB

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-1
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.499
AVERAGE THICKNESS: 3205 3750 3720
AREA: .565
BASELINE STRESS: 33KSC
MAX. LOAD: 13,645#
CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/
STATIC LOAD - 32.4K#



SPECIMEN NUMBER: QPB-2
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.501
AVERAGE THICKNESS: 3735 375 372
AREA: .567
BASELINE STRESS: 33KSC
MAX. LOAD: 18,711#
CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/
STATIC LOAD - 32.9K#



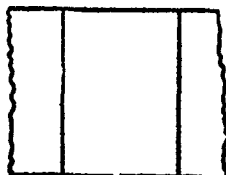
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	0262
	3760	0243
	3660	0220
	3560	0200
	3460	0180
	3360	0163
	3260	0148
	3160	0132
	3060	0118
	2960	0108
	2860	0098
	2760	0091
	2660	0081
Two Lives	2560	0075
	2480	0070
	2380	0068
	2280	0060
	2180	0050
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	0111
	3760	0101
	3660	0092
	3560	0088
	3460	0079
	3360	0072
	3260	0067
	3160	0060
	3060	0056
	2960	0051
	2860	0048
	2760	0043
	2660	0039
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

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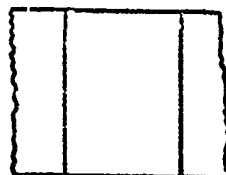
FATIGUE TEST DATA

SPECIMEN NUMBER: QPS-3
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 0.720 0.75 0.755
AREA: .568
BASELINE STRESS: 33 KSI
MAX. LOAD: 18,744#
CYCLES AT TERMINATION/ 3 Lives / _____
STATIC LOAD - 31.2 K#



$\frac{1}{2}c = .60$

SPECIMEN NUMBER: QPS-4
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 ④ 5
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 0.740 0.760 0.765
AREA: .568
BASELINE STRESS: 33 KSI
MAX. LOAD: 18,744#
CYCLES AT TERMINATION/ 3 Lives / _____
STATIC LOAD - 31.2 K#



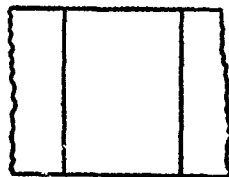
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 0.402	0.040
	3760 0.362	0.041
	3660 0.321	0.040
	3560 0.281	0.029
	3460 0.252	0.027
	3360 0.225	0.024
	3260 0.201	0.022
	3160 0.179	0.019
	3060 0.160	0.018
	2960 0.142	0.014
	2860 0.128	0.013
	2760 0.115	0.010
	2660 0.105	0.014
Two Lives	2560 0.091	0.010
	2480 0.081	0.010
	2380 0.071	0.006
	2280 0.065	0.007
	2180 0.058	0.005
	2080 0.053	0.006
	1980 0.047	0.006
	1880 0.041	0.003
	1780 0.038	0.007
	1680 0.031	0.003
	1580 0.028	0.004
	1480 0.024	0.005
	1380 0.019	0.004
One Life	1280 0.015	0.004
	1200 0.011	0.001
	1100 0.010	0.002
	1000 0.008	0.002
	900 0.006 / 0.010	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 0.818	0.107
	3760 0.711	0.102
	3660 0.609	0.092
	3560 0.517	0.074
	3460 0.443	0.061
	3360 0.382	0.047
	3260 0.335	0.042
	3160 0.293	0.038
	3060 0.255	0.031
	2960 0.224	0.033
	2860 0.191	0.029
	2760 0.162	0.022
	2660 0.140	0.015
Two Lives	2560 0.125	0.013
	2480 0.112	0.015
	2380 0.097	0.016
	2280 0.081	0.011
	2180 0.070	0.010
	2080 0.060	0.008
	1980 0.052	0.007
	1880 0.045	0.005
	1780 0.040	0.005
	1680 0.035	0.006
	1580 0.029	0.005
	1480 0.024	0.003
	1380 0.021	0.004
One Life	1280 0.017	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	

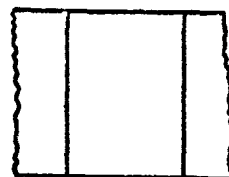
GENERAL DYNAMICS
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FATIGUE TEST DATA

SPECIMEN NUMBER: 9P6-5
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 ⑤
AVERAGE WIDTH: 1.503
AVERAGE THICKNESS: 372* 373 373
AREA: .568
BASELINE STRESS: 33ksi
MAX. LOAD: 18744*
CYCLES AT TERMINATION/FAILURE: 3Lives/
STATIC LOAD - 32.3 k*



9P6-6
SPECIMEN NUMBER: 9P6-6
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5 6
AVERAGE WIDTH: 1.499
AVERAGE THICKNESS: 372.5 373.2 372.0
AREA: .567
BASELINE STRESS: 33ksi
MAX. LOAD: 18711*
CYCLES AT TERMINATION/FAILURE: 3Lives/
STATIC LOAD - 26.4 k*



FRACTOGRAPHIC DATA

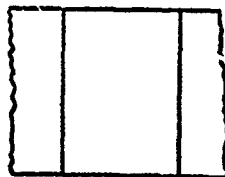
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 0449	0047
	3760 0402	0046
	3660 0356	0037
	3560 0319	0037
	3460 0282	0033
	3360 0249	0028
	3260 0221	0022
	3160 0199	0027
	3060 0172	0021
	2960 0151	0019
	2860 0132	0013
	2760 0119	0017
	2660 0102	0013
Two Lives	2560 0089	0007
	2480 0082	0012
	2380 0070	0009
	2280 0061	0010
	2180 0051	0009
	2080 0042	0008
	1980 0039	0005
	1880 0029	0005
	1780 0024	0003
	1680 0021	0003
	1580 0018	0004
	1480 0014	0002
	1380 0012	0001
One Life	1280 0011	0002
	1200 0009	0002
	1100 0007	0002
	1000 0005	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840 .2170	.0340
	3760 .1830	.0254
	3660 .1576	.0211
	3560 .1365	.0178
	3460 .1137	.0162
	3360 .1025	.0139
	3260 .0886	.0126
	3160 .0760	.0103
	3060 .0657	.0095
	2960 .0562	.0083
	2860 .0479	.0077
	2760 .0402	.0061
	2660 .0341	.0040
Two Lives	2560 .0301	.0032
	2480 .0269	.0035
	2380 .0234	.0031
	2280 .0203	.0020
	2180 .0173	.0025
	2080 .0148	.0018
	1980 .0129	.0020
	1880 .0109	.0012
	1780 .0097	.0014
	1680 .0083	.0019
	1580 .0064	.0017
	1480 .0047	
	1380 0	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	

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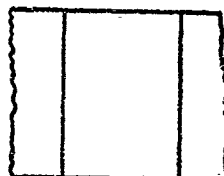
FATIGUE TEST DATA

SPECIMEN NUMBER: Qp6-7
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.499
AVERAGE THICKNESS: 2745 3756 5724
AREA: .568
BASELINE STRESS: 33 Ksc
MAX. LOAD: 18,744.0*
CYCLES AT ~~TERMINATION~~/FAILURE: * 3Lives/

→ @ 953,792 L.P.s
→ 3699.12 FLT-HRS*



SPECIMEN NUMBER: Qp6-8
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.500
AVERAGE THICKNESS: 275 375 3745
AREA: .569
BASELINE STRESS: 33 Ksi
MAX. LOAD: 18,777.0*
CYCLES AT TERMINATION/FAILURE: 3Lives/
Static Load - 29.9 K*



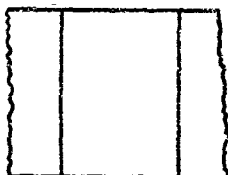
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3660	.3467
	3560	.2874
	3460	.2281
	3360	.1883
	3260	.1588
	3160	.1352
	3060	.1168
	2960	.1008
	2860	.0859
	2760	.0733
	2660	.0631
	2560	.0538
Two Lives	2480	.0470
	2380	.0413
	2280	.0362
	2180	.0317
	2080	.0273
	1980	.0233
	1880	.0202
	1780	.0172
	1680	.0145
	1580	.0122
	1480	.0100
	1380	.0086
	1280	.0072
One Life	1200	.0055
	1100	.0048
	1000	.0035
	900	.0027
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.0936
	3760	.0845
	3660	.0745
	3560	.0652
	3460	.0569
	3360	.0497
	3260	.0438
	3160	.0383
	3060	.0334
	2960	.0291
	2860	.0256
	2760	.0222
	2660	.0185
Two Lives	2560	.0162
	2480	.0139
	2380	.0118
	2280	.0099
	2180	.0085
	2080	.0075
	1980	.0066
	1880	.0059
	1780	.0051
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	

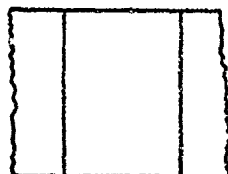
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: 08B-7
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.501
AVERAGE THICKNESS: 371 3725 375
AREA: .567
BASELINE STRESS: 33ksi
MAX. LOAD: 18,711 #
CYCLES AT TERMINATION/FATIGUE: 3Lives/
STATIC LOAD - 32.3 K#



SPECIMEN NUMBER: 08B-10
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.501
AVERAGE THICKNESS: 373 377 376
AREA: .569
BASELINE STRESS: 33ksi
MAX. LOAD: 18,777 #
CYCLES AT TERMINATION/FATIGUE: 3Lives/
STATIC LOAD - 27.7 K#



$\%c = .28$

FRACTOGRAPHIC DATA

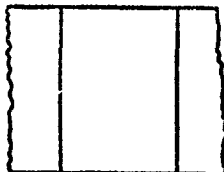
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	0297
	3760	0266
	3660	0231
	3560	0201
	3460	0174
	3360	0162
	3260	0145
	3160	0131
	3060	0120
	2960	0113
	2860	0102
	2760	0090
	2660	0079
Two Lives	2560	0072
	2480	0066
	2380	0058
	2280	0052
	2180	0049
	2080	0042
	1980	0040
	1880	0036
	1780	0033
	1680	0030
	1580	0029
	1480	0027
	1380	0025
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3340	.1430
	3760	.1270
	3660	.1105
	3560	.0956
	3460	.0831
	3360	.0733
	3260	.0633
	3160	.0553
	3060	.0490
	2960	.0435
	2860	.0387
	2760	.0343
	2660	.0306
Two Lives	2560	.0273
	2480	.0251
	2380	.0223
	2280	.0199
	2180	.0173
	2080	.0150
	1980	.0131
	1880	.0112
	1780	.0093
	1680	.0081
	1580	.0070
	1480	.0055
	1380	.0049
One Life	1280	.0044
	1200	.0039
	1100	.0036
	1000	.0032
	900	.0028 / .0101
	800	
	700	
	600	
	500	
	400	
	300	
	200	

(63)

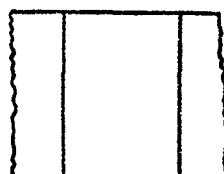
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-11
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 ④ 5
AVERAGE WIDTH: 1.497
AVERAGE THICKNESS: 3705 373 3725
AREA: .564
BASELINE STRESS: 33ksi
MAX. LOAD: 18,612#
CYCLES AT TERMINATION/FAILURE: 3Lives/
STATIC LOAD - 23.7 K#



SPECIMEN NUMBER: QPB-12
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 ⑥
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 3735 3755 374
AREA: .568
BASELINE STRESS: 33ksi
MAX. LOAD: 18,744#
CYCLES AT TERMINATION/FAILURE: 3Lives/
STATIC LOAD - 31.3 K#



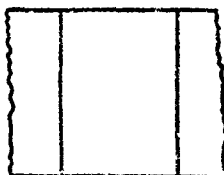
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	2.369
	3760	2.688
	3660	1.802
	3560	1.537
	3460	1.328
	3360	1.138
	3260	0.980
	3160	0.839
	3060	0.714
	2960	0.615
	2860	0.530
	2760	0.450
	2660	0.377
Two Lives	2560	0.293
	2480	0.253
	2380	0.222
	2280	0.195
	2180	0.173
	2080	0.148
	1980	0.122
	1880	0.101
	1780	0.081
	1680	0.063
	1580	0.049
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	0.505
	3760	0.461
	3660	0.413
	3560	0.378
	3460	0.341
	3360	0.309
	3260	0.276
	3160	0.248
	3060	0.227
	2960	0.205
	2860	0.184
	2760	0.167
	2660	0.144
Two Lives	2560	0.129
	2480	0.117
	2380	0.101
	2280	0.091
	2180	0.080
	2080	0.069
	1980	0.060
	1880	0.050
	1780	0.045
	1680	0.038
	1580	0.032
	1480	0.027
	1380	0.022
One Life	1280	0.018
	1200	0.015
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	

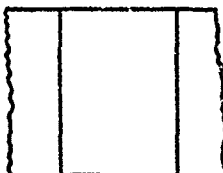
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-13
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.503 _____
AVERAGE THICKNESS: 374 376 3735
AREA: .570
BASELINE STRESS: 33Ksi
MAX. LOAD: 18810 #
CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/
STATIC LOAD - 20.3 K*



SPECIMEN NUMBER: QPB-14
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.501 _____
AVERAGE THICKNESS: 374 375 371
AREA: .569
BASELINE STRESS: 33Ksi
MAX. LOAD: 18,777 #
CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/
STATIC LOAD - 29.5 K*



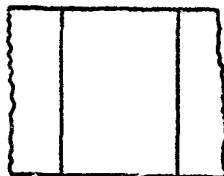
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	2837
	3760	2376
	3660	1968
	3560	1664
	3460	1408
	3360	1201
	3260	1018
	3160	0860
	3060	0722
	2960	0621
	2860	0533
	2760	0457
	2660	0384
Two Lives	2560	0330
	2480	0292
	2380	0248
	2280	0207
	2180	0176
	2080	0135
	1980	0102
	1880	0075
	1780	0050
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.0788
	3760	.0702
	3660	.0601
	3560	.0519
	3460	.0443
	3360	.0388
	3260	.0338
	3160	.0294
	3060	.0256
	2960	.0223
	2860	.0193
	2760	.0162
	2660	.0139
Two Lives	2560	.0122
	2480	.0110
	2380	.0101
	2280	.0085
	2180	.0073
	2080	.0065
	1980	.0057
	1880	.0050
	1780	.0043
	1680	.0038
	1580	.0035
	1480	.0032
	1380	.0028
One Life	1280	.0022
	1200	.0019
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

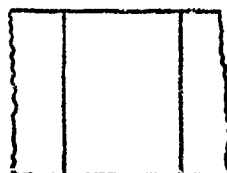
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-15
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.503 _____
AVERAGE THICKNESS: _____ 372 374 372
AREA: .569 _____
BASELINE STRESS: 33KSC _____
MAX. LOAD: 18,777# _____
CYCLES AT TERMINATION/~~REVERSE~~: 3Lives/ _____
STATIC LOAD - 28.0K#



SPECIMEN NUMBER: QPB-16 _____
SPECTRUM: Bomber _____
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5062 _____
AVERAGE THICKNESS: 3775 3757 3798 3771
AREA: .5684 _____
BASELINE STRESS: 33KSC _____
MAX. LOAD: 18,765.1# _____
CYCLES AT TERMINATION/~~REVERSE~~: 3Lives/ _____
STATIC LOAD - 31.5#



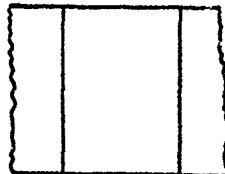
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.1643
	3760	.1420
	3660	.1182
	3560	.0980
	3460	.0808
	3360	.0663
	3260	.0540
	3160	.0440
	3060	.0361
	2960	.0302
	2860	.0254
	2760	.0218
	2660	.0186
Two Lives	2560	.0162
	2480	.0143
	2380	.0122
	2280	.0108
	2180	.0094
	2080	.0085
	1980	.0075
	1880	.0067
	1780	.0059
	1680	.0049
	1580	.0041
	1480	.0035
	1380	.0029
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0290
	3760	.0258
	3660	.0221
	3560	.0200
	3460	.0178
	3360	.0161
	3260	.0148
	3160	.0127
	3060	.0107
	2960	.0088
	2860	.0075
	2760	.0065
	2660	.0053
Two Lives	2560	.0045
	2480	.0040
	2380	.0034
	2280	.0029
	2180	.0025
	2080	.0021
	1980	.0018
	1880	.0015
	1780	.0013
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	

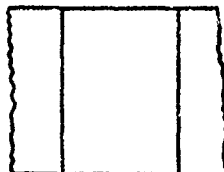
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-17
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.5022
AVERAGE THICKNESS: 3777 3773 3785 3773
AREA: 5674
BASE LINE STRESS: 33 KSI
MAX. LOAD: 18723.6 #
CYCLES AT TERMINATION/FAILURE: * 3 Lives /
853,159 L.P.S = 3308.83 FLT-HRS *



SPECIMEN NUMBER: QPB-18
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.5029
AVERAGE THICKNESS: 3767 3754 3779 3767
AREA: 5661
BASELINE STRESS: 33 KSI
MAX. LOAD: 18681.1 #
CYCLES AT TERMINATION/FAILURE: 3 Lives /
STATIC LOAD-288K #



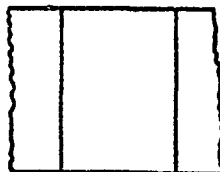
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	.4322
	3260	.3553
	3160	.2347
	3060	.2374
	2960	.1995
	2860	.1659
	2760	.1378
	2660	.1124
Two Lives	2560	.0718
	2480	.0781
	2380	.0648
	2280	.0536
	2180	.0445
	2080	.0376
	1980	.0318
	1880	.0271
	1780	.0228
	1680	.0190
	1580	.0153
	1480	.0124
	1380	.0098
One Life	1280	.0080
	1200	.0065
	1100	.0050
	1000	.0047
	900	.0042
	800	.0037
	700	.0032
	600	.0025
	500	.0020
	400	.0017
	300	.0015
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.1250
	3760	.1088
	3660	.0901
	3560	.0754
	3460	.0630
	3360	.0524
	3260	.0442
	3160	.0377
	3060	.0322
	2960	.0274
	2860	.0229
	2760	.0190
	2660	.0155
Two Lives	2560	.0125
	2480	.0104
	2380	.0088
	2280	.0074
	2180	.0062
	2080	.0053
	1980	.0045
	1880	.0038
	1780	.0030
	1680	.0023
	1580	.0018
	1480	.0013
	1380	.0011
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
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FATIGUE TEST DATA

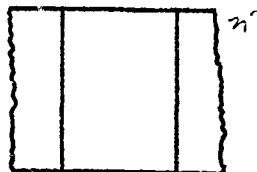
SPECIMEN NUMBER: QPB-19
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.4997
AVERAGE THICKNESS: 3792.3798.3802.3776
AREA: .5687
BASELINE STRESS: 33ksi
MAX. LOAD: 18,766.7 #
CYCLES AT ~~TERMINATION~~/FAILURE: * 4 Lives/
= @ 1,033,616 h.p.'s
→ 4008.7 FLT-HRS *



TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-20
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 ⑥
AVERAGE WIDTH: 1.5007
AVERAGE THICKNESS: 3793.3802.3813.3764
AREA: .5692
BASELINE STRESS: 33ksi
MAX. LOAD: 18,784.1 #
CYCLES AT ~~TERMINATION~~/FAILURE: * 4 Lives/
~~832,572 h.p.'s~~
832,572 h.p.'s = 3228.78 FLT-HRS.

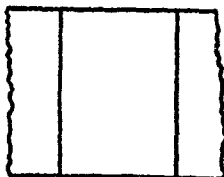


FRACTOGRAPHIC DATA		
	4008.7	.4130
	3446	3078
		.1052
		0668
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	2410
	3760	2103
	3660	1779
	3560	1534
	3460	1327
	3360	1145
	3260	0982
	3160	0838
	3060	0702
	2960	0584
	2860	0485
	2760	0402
	2660	0338
Two Lives	2560	0294
	2480	0255
	2380	0220
	2280	0191
	2180	0166
	2080	0141
	1980	0121
	1880	0099
	1780	0078
	1680	0064
	1580	0051
	1480	0036
	1380	0025
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	.4171
	3160	.3241
	3060	.2638
	2960	.2211
	2860	.1860
	2760	.1570
	2660	.1315
Two Lives	2560	.1102
	2480	.0970
	2380	.0829
	2280	.0698
	2180	.0588
	2080	.0503
	1980	.0430
	1880	.0371
	1780	.0320
	1680	.0271
	1580	.0233
	1480	.0198
	1380	.0161
One Life	1280	.0141
	1200	.0112
	1100	.0085
	1000	.0068
	900	.0038
	800	.0025
	700	.0018
	600	.0014
	500	.0010
	400	.0008
	300	.0006
	200	

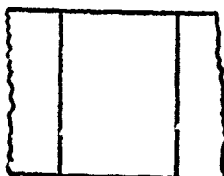
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: 91A-21
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.5048
AVERAGE THICKNESS: .3796 .3800 .3806 .3783
AREA: .5713
BASELINE STRESS: 33ksi
MAX. LOAD: 18,852.0 #
CYCLES AT TERMINATION/FRACTURE: 3Lives/
STATIC LOAD - 33.3 K#



SPECIMEN NUMBER: QPB-22
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.5003
AVERAGE THICKNESS: .3792 .3775 .3807 .3794
AREA: .5689
BASELINE STRESS: 33ksi
MAX. LOAD: 18,774.2 #
CYCLES AT TERMINATION/FRACTURE: 3Lives/
STATIC LOAD - 31.9 K#



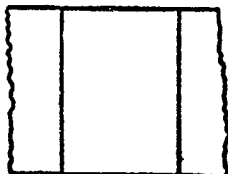
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0177
	3760	.0150
	3660	.0130
	3560	.0113
	3460	.0101
	3360	.0091
	3260	.0082
	3160	.0074
	3060	.0065
	2960	.0056
	2860	.0048
	2760	.0040
	2660	.0033
Two Lives	2560	.0029
	2480	.0025
	2380	.0021
	2280	.0018
	2180	.0013
	2080	.0011
	1980	.0009
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0282
	3760	.0250
	3660	.0220
	3560	.0194
	3460	.0170
	3360	.0151
	3260	.0134
	3160	.0115
	3060	.0101
	2960	.0090
	2860	.0079
	2760	.0071
	2660	.0062
Two Lives	2560	.0053
	2480	.0047
	2380	.0040
	2280	.0033
	2180	.0029
	2080	.0025
	1980	.0021
	1880	.0019
	1780	.0017
	1680	.0013
	1580	.0010
	1480	.0008
	1380	.0007
One Life	1280	.0006
	1200	.0005
	1100	.0004
	1000	.0003
	900	
	800	
	700	
	600	
	500	
	400	
	300	

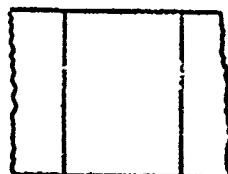
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-23
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.5018
AVERAGE THICKNESS: .3786 .3786 .3788 .3785
AREA: .5686
BASELINE STRESS: 33ksi
MAX. LOAD: 18763.8#
CYCLES AT TERMINATION/~~REVERSE~~: 3Lives/
27 STATIC LOAD - 28.1K#



SPECIMEN NUMBER: QPB-24
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 ⑥
AVERAGE WIDTH: 1.497
AVERAGE THICKNESS: .371 .374 .373
AREA: .565
BASELINE STRESS: 33ksi
MAX. LOAD: 18645.5#
CYCLES AT TERMINATION/~~REVERSE~~: 3Lives/
STATIC LOAD - 22.1K#



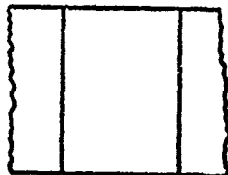
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0850
	3760	.0735
	3660	.0625
	3550	.0532
	3460	.0454
	3360	.0391
	3260	.0340
	3160	.0302
	3060	.0285
	2960	.0235
	2860	.0209
	2760	.0186
	2660	.0161
Two Lives	2560	.0143
	2480	.0130
	2380	.0117
	2280	.0101
	2180	.0091
	2080	.0079
	1980	.0070
	1880	.0061
	1780	.0052
	1680	.0047
	1560	.0040
	1480	.0034
	1380	.0029
One Life	1280	.0022
	1200	.0019
	1100	.0016
	1000	.0012
	900	.0010
	800	.0008
	700	.0006
	600	.0003
	500	.0002
	400	.0001
	300	
	200	
	100	
	0	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.2531
	3760	.2145
	3660	.1794
	3560	.1513
	3460	.1278
	3360	.1075
	3260	.0909
	3160	.0771
	3060	.0669
	2960	.0571
	2860	.0496
	2760	.0429
	2660	.0372
Two Lives	2560	.0327
	2480	.0293
	2380	.0259
	2280	.0221
	2180	.0196
	2080	.0170
	1980	.0142
	1880	.0116
	1780	.0098
	1680	.0081
	1580	.0068
	1480	.0056
	1380	.0047
	1280	.0039
One Life	1200	.0034
	1100	.0028
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

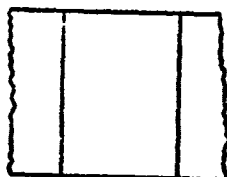
FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-25
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.502
AVERAGE THICKNESS: 374 375 374
AREA: .569
BASELINE STRESS: 33Ksi
MAX. LOAD: 18,777 #
CYCLES AT TERMINATION/PRESSURE: 3Lives/
STATIC LOAD - 29.2K#



SPECIMEN NUMBER: QPB-26
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 372 374 371
AREA: .566
BASELINE STRESS: 33Ksi
MAX. LOAD: 18,678 #
CYCLES AT TERMINATION/PRESSURE: 3Lives/
STATIC LOAD - 30.9K#

origin chip -



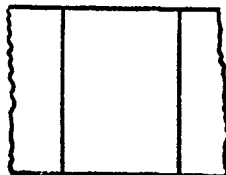
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .1204	.0166
	3760 .1038	.0177
	3660 .0861	.0154
	3560 .0707	.0109
	3460 .0598	.0096
	3360 .0507	.0079
	3260 .0423	.0062
	3160 .0361	.0052
	3060 .0309	.0040
	2960 .0269	.0044
	2860 .0225	.0035
	2760 .0190	.0033
	2660 .0157	.0019
Two Lives	2560 .0138	.0017
	2480 .0121	.0013
	2380 .0108	.0019
	2280 .0089	.0018
	2180 .0071	.0016
	2080 .0055	.0010
	1980 .0045	.0007
	1880 .0038	.0008
	1780 .0030	.0006
	1680 .0024	.0004
	1580 .0020	.0002
	1480 .0018	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .0623	.0073
	3760 .0550	.0080
	3660 .0470	.0071
	3560 .0399	.0059
	3460 .0340	.0054
	3360 .0286	.0045
	3260 .0241	.0038
	3160 .0203	.0031
	3060 .0172	.0027
	2960 .0145	.0021
	2860 .0124	.0015
	2760 .0109	.0010
	2660 .0099	.0009
Two Lives	2560 .0090	.0007
	2480 .0083	.0008
	2380 .0075	.0006
	2280 .0069	.0007
	2180 .0062	.0007
	2080 .0055	.0004
	1980 .0051	.0004
	1880 .0047	.0005
	1780 .0042	.0002
	1680 .0040	.0002
	1580 .0038	.0004
	1480 .0034	.0002
	1380 .0032	.0002
One Life	1280 .0030	.0002
	1200 .0028	.0002
	1100 .0026	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

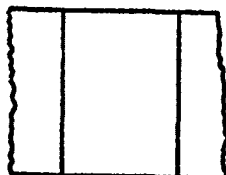
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-27
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.497
AVERAGE THICKNESS: .372 .375 .371
AREA: .566
BASELINE STRESS: 33ksi
MAX. LOAD: 18,678 #
CYCLES AT TERMINATION/FAILURE: 31lives/
STATIC LOAD-27.8k#



SPECIMEN NUMBER: QPB-28
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5 ⑥
AVERAGE WIDTH: 1.496
AVERAGE THICKNESS: .366 .349 .367
AREA: .557
BASELINE STRESS: 33ksi
MAX. LOAD: 18,381 #
CYCLES AT TERMINATION/FAILURE: 31lives/
STATIC LOAD-24.3 k#



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.1470
	3760	.1277
	3660	.1062
	3560	.0887
	3460	.0746
	3360	.0627
	3260	.0531
	3160	.0460
	3060	.0390
	2960	.0339
	2860	.0293
	2760	.0254
	2660	.0219
Two Lives	2560	.0189
	2480	.0166
	2380	.0141
	2280	.0117
	2180	.0099
	2080	.0082
	1980	.0069
	1880	.0059
	1780	.0050
	1680	.0043
	1580	.0036
	1480	.0030
	1380	
One Life	1230	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.1918
	3760	.1627
	3660	.1339
	3560	.1092
	3460	.0901
	3360	.0745
	3260	.0622
	3160	.0522
	3060	.0442
	2960	.0378
	2860	.0323
	2760	.0279
	2660	.0231
Two Lives	2560	.0200
	2480	.0171
	2380	.0145
	2280	.0121
	2180	.0099
	2080	.0080
	1980	.0061
	1880	.0043
	1780	.0035
	1680	.0030
	1580	.0025
	1480	.0021
	1380	.0018
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-29

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: ① 2 3 4 5

AVERAGE WIDTH: 1.498

AVERAGE THICKNESS: 366 369 366

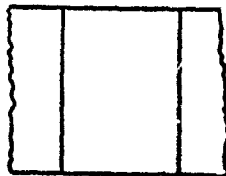
AREA: 557

BASILINE STRESS: 33KSI

MAX. LOAD: 18,381#

CYCLES AT TERMINATION/FAILURE: 3Lives/

STATIC LOAD-26.8K#



SPECIMEN NUMBER: QPB-30

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.5065

AVERAGE THICKNESS: 3735 3736 3734 3742

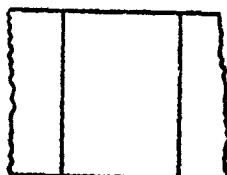
AREA: 5627

BASILINE STRESS: 33KSI

MAX. LOAD: 18,570#

CYCLES AT TERMINATION/FAILURE: 3Lives/

STATIC LOAD-29.2K#



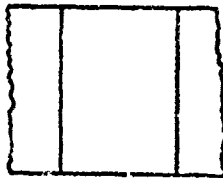
FRAC TOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .1361	.0199
	3760 .1162	.0194
	3660 .0968	.0160
	3560 .0808	.0132
	3460 .0676	.0108
	3360 .0568	.0089
	3260 .0479	.0077
	3160 .0402	.0054
	3060 .0348	.0046
	2960 .0300	.0042
	2860 .0253	.0037
	2760 .0221	.0031
	2660 .0190	.0024
Two Lives	2560 .0166	.0023
	2480 .0143	.0023
	2380 .0120	.0019
	2280 .0101	.0019
	2180 .0082	.0015
	2080 .0067	.0010
	1980 .0057	.0008
	1880 .0049	.0010
	1780 .0039	.0010
	1680 .0029	.0008
	1580 .0021	.0003
	1480 .0018	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
	100	
	0	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .1112	.0103
	3760 .1009	.0106
	3660 .0903	.0104
	3560 .0795	.0094
	3460 .0705	.0078
	3360 .0627	.0070
	3260 .0557	.0057
	3160 .0500	.0054
	3060 .0445	.0046
	2960 .0399	.0039
	2860 .0360	.0040
	2760 .0320	.0034
	2660 .0286	.0025
Two Lives	2560 .0261	.0021
	2480 .0240	.0029
	2380 .0211	.0023
	2280 .0188	.0025
	2180 .0163	.0021
	2080 .0142	.0024
	1980 .0118	.0018
	1880 .0100	.0019
	1780 .0081	.0016
	1680 .0065	.0014
	1580 .0051	.0011
	1480 .0040	.0011
	1380 .0029	.0008
One Life	1280 .0021	.0002
	1200 .0019	.0004
	1100 .0015	.0002
	1000 .0013	.0003
	900 .0010	.0001
	800 .0009	.0002
	700 .0007	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

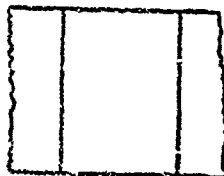
FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-32
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.495
AVERAGE THICKNESS: 372 374 373
AREA: .565
BASELINE STRESS: 33KSI
MAX. LOAD: 18,645#
CYCLES AT ~~TERMINATION~~/FAILURE: * 3Lives/
@ 752,580 L.P.s = 2918.75 FLTS.



First Crack Length
100 0005

SPECIMEN NUMBER: QPB-33
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.499
AVERAGE THICKNESS: 365 371 376
AREA: .562
BASELINE STRESS: 33KSI
MAX. LOAD: 18,546#
CYCLES AT TERMINATION/FAILURE: 3Lives/
STATIC LOAD - 32.1K#



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3750	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2966	.0667
	2860	.0699
	2760	.0494
	2660	.0409
Two Lives	2560	.0241
	2480	.0271
	2380	.0223
	2280	.0178
	2180	.0134
	2080	.0115
	1980	.0090
	1880	.0072
	1780	.0056
	1680	.0043
	1580	.0030
	1480	.0038
	1380	.0028
One Life	1280	.0022
	1200	.0027
	1100	.0023
	1000	.0023
	900	.0011
	800	.0014
	700	.0013
	600	.0009
	500	.0010
	400	.0006
	300	.0005
	200	.0004
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0338
	3750	.0343
	3660	.0302
	3560	.0268
	3460	.0239
	3360	.0209
	3260	.0181
	3160	.0160
	3060	.0138
	2960	.0120
	2860	.0102
	2760	.0087
	2660	.0075
Two Lives	2560	.0064
	2480	.0059
	2380	.0049
	2280	.0041
	2180	.0034
	2080	.0026
	1980	.0020
	1880	.0015
	1780	.0012
	1680	.0007
	1580	.0006
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TACU ACTION CHEM

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-34

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.500

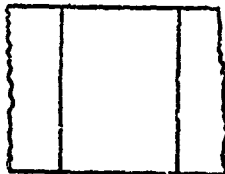
AVERAGE THICKNESS: 372 370 375 370

AREA: .558

BASLINE STRESS: 33 KSI

MAX. LOAD: 18,414 #

CYCLES AT TERMINATION/FAILURE: 3 Lives
STATIC LOAD - 31.4 K#



SPECIMEN NUMBER: QPB-36

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.501

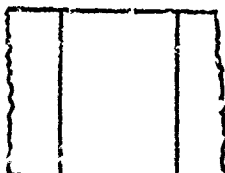
AVERAGE THICKNESS: 366 368 365

AREA: .556

BASLINE STRESS: 33 KSI

MAX. LOAD: 18,348 #

CYCLES AT TERMINATION/FAILURE: 3 Lives
STATIC LOAD - 28.2 K#



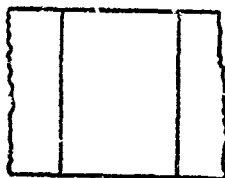
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840	.0325	.0038
3760	.0287	.0037
3680	.0250	.0031
3600	.0219	.0031
3460	.0188	.0032
3360	.0157	.0025
3260	.0131	.0020
3160	.0111	.0019
3060	.0092	.0021
2960	.0071	.0010
2860	.0061	.0012
2760	.0049	.0011
2660	.0038	.0006
Two Lives 2560	.0022	.0004
2480	.0028	.0005
2380	.0023	.0002
2280	.0021	.0001
2180	.0019	.0002
2080	.0016	.0003
1980	.0013	.0001
1880	.0012	.0001
1780	.0011	.0001
1680	.0010	.0002
1580	.0008	.0003
1480	.0005	.0002
1380	.0003	
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840	.1451	.0148
3760	.1303	.0163
3660	.1140	.0142
3560	.0998	.0123
3460	.0875	.0107
3360	.0768	.0094
3260	.0672	.0089
3160	.0583	.0079
3060	.0504	.0064
2960	.0440	.0060
2860	.0380	.0054
2760	.0326	.0046
2660	.0280	.0031
Two Lives 2560	.0249	.0026
2480	.0223	.0030
2380	.0193	.0024
2280	.0169	.0021
2180	.0148	.0026
2080	.0122	.0019
1980	.0103	.0018
1880	.0085	.0011
1780	.0074	.0011
1680	.0063	.0012
1580	.0051	.0012
1480	.0039	.0008
1380	.0031	.0006
One Life 1280	.0025	.0005
1200	.0020	.0006
1100	.0014	.0004
1000	.0010	.0004
900	.0006	.0003
800	.0003	
700		
600		
500		
400		
300		
200		

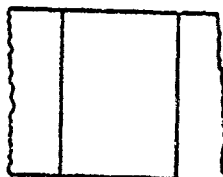
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPB-37
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.499
AVERAGE THICKNESS: 370 373 371
AREA: .565
BASELINE STRESS: 33Ksi
MAX. LOAD: 18,645 #
CYCLES AT ~~TERMINATION~~/FAILURE: * 3Lives/
@ 837663L.P's = 3248.73 FLT-Hrs *



SPECIMEN NUMBER: QPB-8 (QPB-38)
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 ④ 5
AVERAGE WIDTH: 1.499
AVERAGE THICKNESS: 367 371 368
AREA: .560
BASELINE STRESS: 33Ksi
MAX. LOAD: 18,480 #
CYCLES AT TERMINATION/FAILURE: 3Lives/
STATIC LOAD - 23.4 K#



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	.3754
	3160	.2752
	3060	.2210
	2960	.1837
	2860	.1548
	2760	.1323
	2660	.1137
Two Lives	2560	.0971
	2480	.0865
	2380	.0749
	2280	.0649
	2180	.0567
	2080	.0494
	1980	.0429
	1880	.0377
	1780	.0328
	1680	.0289
	1580	.0253
	1480	.0227
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.1990
	3760	.1678
	3660	.1376
	3560	.1135
	3460	.0941
	3360	.0790
	3260	.0651
	3160	.0548
	3060	.0460
	2960	.0392
	2860	.0335
	2760	.0290
	2660	.0251
Two Lives	2560	.0210
	2480	.0190
	2380	.0163
	2280	.0139
	2180	.0116
	2080	.0098
	1980	.0082
	1880	.0070
	1780	.0059
	1680	.0050
	1580	.0044
	1480	.0034
	1380	.0030
One Life	1280	.0025
	1200	.0022
	1100	.0019
	1000	.0015
	900	.0012
	800	.0010
	700	.0008
	600	.0008
	500	.0006
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QPF-9 QPB-39

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 (5)

AVERAGE WIDTH: 1.499

AVERAGE THICKNESS: 371 375 376

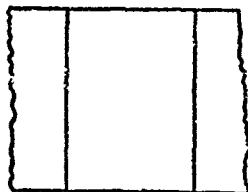
AREA: .564

BASELINE STRESS: 33Ksi

MAX. LOAD: 18,612 #

CYCLES AT TERMINATION/~~FAILURE~~: 3Lives/

STATIC LOAD - 27.0K #



FRACTOGRAPHIC DATA

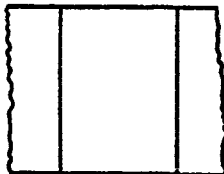
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives 3840	.1659	.0188
3760	.1471	.0199
3660	.1272	.0160
3560	.1112	.0142
3460	.0970	.0126
3360	.0844	.0102
3260	.0742	.0101
3160	.0641	.0084
3060	.0552	.0085
2960	.0467	.0074
2860	.0393	.0068
2760	.0325	.0057
2660	.0268	.0039
Two Lives 2560	.0229	.0019
2480	.0210	.0046
2380	.0164	.0035
2280	.0129	.0021
2180	.0105	.0019
2080	.0089	.0013
1980	.0071	.0016
1880	.0055	.0012
1780	.0043	.0011
1680	.0032	.0011
1580	.0021	
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		

GENERAL DYNAMICS
Fort Worth Division
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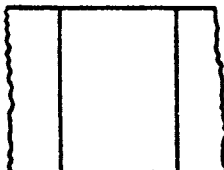
2.1.8 QIB

FATIGUE TEST DATA

SPECIMEN NUMBER: QIB-1
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.503
AVERAGE THICKNESS: 372 374 375
AREA: .562
BASELINE STRESS: 33KSI
MAX. LOAD: 18,546 #
CYCLES AT TERMINATION/FAILURE: 2 #Lives/
STATIC LOAD - 32.2 K#



SPECIMEN NUMBER: QIB-2
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 375 376 374
AREA: .562
BASELINE STRESS: 33KSI
MAX. LOAD: 18,546 # 1-700
CYCLES AT TERMINATION/FAILURE: 3 #Lives/
STATIC LOAD - 33.0 K#



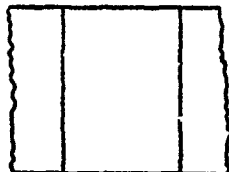
FRACTOGRAPHIC DATA

FLIGHT #	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	0300
	2480	0258
	2380	0212
	2280	0175
	2180	0142
	2080	0114
	1980	0093
	1880	0075
	1780	0063
	1680	0052
	1580	0045
	1480	0038
	1380	0031
One Life	1280	0024
	1200	0018
	1100	0014
	1000	0009
	900	0005
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT #	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	0125
	3760	0113
	3660	0101
	3560	0090
	3460	0082
	3360	0073
	3260	0066
	3160	0060
	3060	0052
	2960	0047
	2860	0041
	2760	0036
	2660	0031
Two Lives	2560	0028
	2480	0025
	2380	0021
	2280	0018
	2180	0015
	2080	0012
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

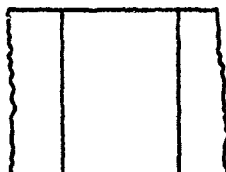
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QTB-3
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5
AVERAGE WIDTH: 1.503
AVERAGE THICKNESS: 378 379 377
AREA: .568
BASELINE STRESS: 33Ksi
MAX. LOAD: 18744#
CYCLES AT TERMINATION/FAILURE: 21 Lives / 660078.8%
STATIC LOAD - 29.8 K#



SPECIMEN NUMBER: QTB-4
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5
AVERAGE WIDTH: 1.501
AVERAGE THICKNESS: 375 377 375
AREA: .564
BASELINE STRESS: 33Ksi
MAX. LOAD: 18612#
CYCLES AT TERMINATION/FAILURE: 28 Lives / 660978.8%
STATIC LOAD - 27.2 K#



FRACTOGRAPHIC DATA

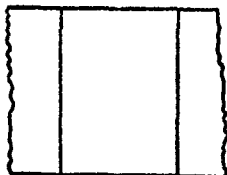
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0749
	2480	.0630
	2380	.0511
	2280	.0420
	2180	.0341
	2080	.0284
	1980	.0236
	1880	.0192
	1780	.0153
	1680	.0125
	1580	.0101
	1480	.0078
	1380	.0060
One Life	1280	.0047
	1200	.0038
	1100	.0030
	1000	.0022
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1801
	2480	.1563
	2380	.1309
	2280	.1082
	2180	.0905
	2080	.0747
	1980	.0616
	1880	.0506
	1780	.0417
	1680	.0343
	1580	.0282
	1480	.0228
	1380	.0171
One Life	1280	.0131
	1200	.0108
	1100	.0079
	1000	.0058
	900	.0040
	800	.0028
	700	.0020
	600	.0014
	500	.0009
	400	.0005
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
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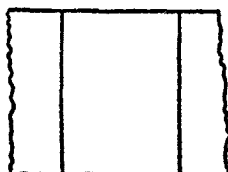
FATIGUE TEST DATA

SPECIMEN NUMBER: QIB-5
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5 ⑥ ³²¹⁴ ^③
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 377 378 376
AREA: .565
BASELINE STRESS: 33Ksi
MAX. LOAD: 18,645 ^{3:00}

CYCLES AT TERMINATION/FAILURE: 2 1/2 Lives / 66,000
3rd Life run without Bolt ³ Data not valid after
2nd life!
STATIC LOAD - 27.7 K#



SPECIMEN NUMBER: QIB-6
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: ① 2 3 4 5
AVERAGE WIDTH: 1.501
AVERAGE THICKNESS: 376 377 375
AREA: .564
BASELINE STRESS: 33Ksi
MAX. LOAD: 18,612 [#]
CYCLES AT TERMINATION/FAILURE: 2 1/2 Lives /
STATIC LOAD - 33.2 K#



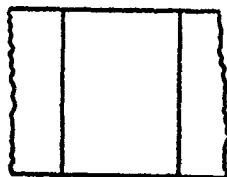
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .1519	.0245
	3760 .1274	.0273
	3660 .1001	.0207
	3560 .0794	.0155
	3460 .0639	.0122
	3360 .0517	.0095
	3260 .0422	.0066
	3160 .0356	.0036
	3060 .0300	.0051
	2960 .0249	.0044
	2860 .0205	.0035
	2760 .0170	.0036
	2660 .0134	.0021
Two Lives	2560 .0113	.0010
	2480 .0103	.0012
	2380 .0091	.0007
	2280 .0084	.0009
	2180 .0075	.0010
	2080 .0065	.0007
	1980 .0058	.0008
	1880 .0050	.0008
	1780 .0042	.0006
	1680 .0036	.0007
	1580 .0029	.0005
	1480 .0024	.0003
	1380 .0021	.0002
One Life	1280 .0019	.0002
	1200 .0017	.0003
	1100 .0014	.0002
	1000 .0012	.0002
	900 .0010	.0002
	800 .0008	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560 .0154	.0016
	2480 .0138	.0020
	2380 .0118	.0018
	2280 .0100	.0016
	2180 .0084	.0012
	2080 .0072	.0009
	1980 .0063	.0010
	1880 .0053	.0005
	1780 .0048	.0007
	1680 .0041	.0005
	1580 .0036	.0005
	1480 .0031	.0004
	1380 .0027	.0003
One Life	1280 .0024	.0002
	1200 .0022	.0003
	1100 .0019	.0003
	1000 .0016	.0003
	900 .0013	.0002
	800 .0011	.0001
	700 .0010	.0001
	600 .0009	.0001
	500 .0008	
	400	
	300	
	200	

GENERAL DYNAMICS
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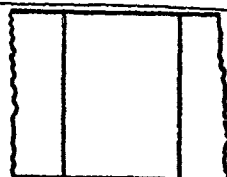
FATIGUE TEST DATA

SPECIMEN NUMBER: QIB-7
SPECTRUM: Bomber
TEST DATE: 10/24/64
TEST FRAME: 1-2-3-4-5
AVERAGE WIDTH: 1.497
AVERAGE THICKNESS: 373 374 374
AREA: .561
BASELINE STRESS: 33ksi
MAX. LOAD: 18,513# A=741
CYCLES AT TERMINATION/FAILURE: 3 Lives
STATIC LOAD-30.6 K#



SPECIMEN NUMBER: QIB-8
SPECTRUM: Bomber
TEST DATE: 10/24/64
TEST FRAME: 1-2-3-4-5-29
AVERAGE WIDTH: 1.500
AVERAGE THICKNESS: 378 380 377
AREA: .568
BASELINE STRESS: 33ksi
MAX. LOAD: 18744 A=750
CYCLES AT TERMINATION/FAILURE: 2 Lives
3rd life run without Bolt
STATIC LOAD-27.8 K#

DATA NOT VALID AFTER 2ND LIFE!



STRESS WAS
HIGHER

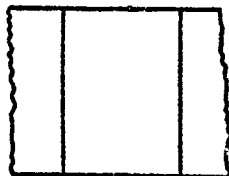
FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0615
	3760	.0524
	3660	.0448
	3560	.0374
	3460	.0316
	3360	.0270
	3260	.0227
	3160	.0188
	3060	.0156
	2960	.0131
	2860	.0108
	2760	.0090
	2660	.0074
Two Lives	2560	.0058
	2480	.0050
	2380	.0041
	2280	.0033
	2180	.0027
	2080	.0020
	1980	.0013
	1880	.0010
	1780	.0008
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.11816
	3760	.09744
	3660	.07687
	3560	.06115
	3460	.04961
	3360	.04076
	3260	.03298
	3160	.02609
	3060	.02100
	2960	.01646
	2860	.01255
	2760	.00992
	2660	.00763
Two Lives	2560	.00581
	2480	.00497
	2380	.00438
	2280	.00396
	2180	.00344
	2080	.00289
	1980	.00245
	1880	.00219
	1780	.00181
	1680	.00140
	1580	.00095
	1480	.00059
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	

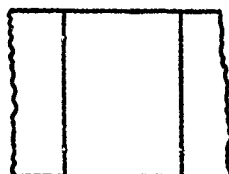
GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QIB-9
SPECTRUM: Bomber
TEST DATE: 10/22/64
TEST FRAME: 1 2 3 4 5 64
AVERAGE WIDTH: 1.498
AVERAGE THICKNESS: 378 378 378
AREA: .567
BASELINE STRESS: 33 KSI *W: 42.7 (crack)*
MAX. LOAD: 18,711# *A: 7.48*
CYCLES AT TERMINATION/FAILURE: 2.8 Lives / 166,078
3 Lives
STATIC LOAD - 27.2 K#



SPECIMEN NUMBER: QIB-10
SPECTRUM: Bomber
TEST DATE: 10/22/64
TEST FRAME: 1 2 3 4 5 90
AVERAGE WIDTH: 1.500
AVERAGE THICKNESS: 377 379 378
AREA: .567
BASELINE STRESS: 33 KSI *W: 42.3*
MAX. LOAD: 18,711 *A: 7.48*
CYCLES AT TERMINATION/FAILURE: 2.8 Lives / 166,078
STATIC LOAD - 33.1 K#



FRACTOGRAPHIC DATA

0.0014 in. diameter

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	.13003
	3760	.0799
	3660	.08728
	3560	.07153
	3460	.05964
	3360	.05022
	3260	.04265
	3160	.03635
	3060	.03069
	2960	.02566
	2860	.02137
	2760	.01700
	2660	.01378
Two Lives	2560	.01009
	2480	.00832
	2380	.00719
	2280	.00608
	2180	.00532
	2080	.00454
	1980	.00402
	1880	.00328
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1287	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.00657
	2480	2C = .01449
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: QIB-11

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5

AVERAGE WIDTH: 1.500

AVERAGE THICKNESS: 378 380 375

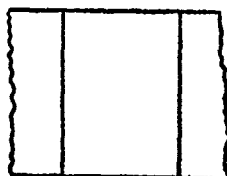
AREA: .566

BASILINE STRESS: 33KSI

MAX. LOAD: 18,678#

CYCLES AT TERMINATION/FAILURE: * 3 Lives /

@ 829,701 R⁶ = 3217.89 FLT-HRS *



SPECIMEN NUMBER: QIB-12

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 ⑧

AVERAGE WIDTH: 1.497

AVERAGE THICKNESS: 376 378 373

AREA: .563

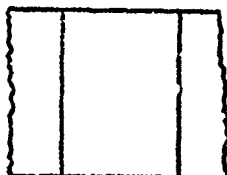
BASILINE STRESS: 33KSI *Cal = 43.0 / 1.563*

MAX. LOAD: 18,579 *A = 743*

CYCLES AT TERMINATION/FAILURE: 2 Lives / 660078

STATIC LOAD - 32.5 K#

FINAL $\sigma_c = .41$



FRACTOGRAPHIC DATA

FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840		
3760		
3660		
3560		
3460		
3360		
3260	.4982	.0103
3160	.4879	.1718
3060	.3161	.0500
2960	.2661	.0421
2860	.2240	.0362
2760	.1878	.0323
2660	.1555	.0287
Two Lives 2560	.1268	.0192
2480	.1076	.0206
2380	.0870	.0121
2280	.0689	.0134
2180	.0565	.0105
2080	.0460	.0078
1980	.0382	.0063
1880	.0319	.0054
1780	.0265	.0046
1680	.0219	.0046
1580	.0173	.0032
1480	.0141	.0031
1380	.0110	.0022
One Life 1280	.0088	.0019
1200	.0071	.0016
1100	.0058	.0015
1000	.0040	.0009
900	.0031	.0007
800	.0024	.0006
700	.0018	.0006
600	.0012	
500		
400		
300		
200		
FLIGHT HOURS	CRACK LENGTH INCH	INCREMENT INCH
Three Lives 3840		
3760		
3660		
3560		
3460		
3360		
3260		
3160		
3060		
2960		
2860		
2760		
2660		
Two Lives 2560	.00782	2C = .01896
2480		
2380		
2280		
2180		
2080		
1980		
1880		
1780		
1680		
1580		
1480		
1380		
One Life 1280		
1200		
1100		
1000		
900		
800		
700		
600		
500		
400		
300		
200		

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2.1.9 ZWPF
FATIGUE TEST DATA

SPECIMEN NUMBER: ZWPF-1

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6

RAGE WIDTH: 1.501 1.501 1.501 1.501

RAGE THICKNESS: .377 .378 .379 .374

A: .566 Ral-18752

ELINE STRESS: 34ksi CS-97.52

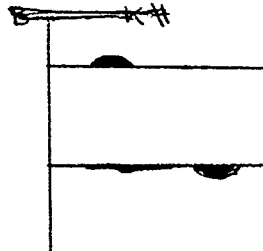
LOAD: 19,239.82 Apt-270

LES AT TERMINATION/_____

2 Lives/_____

1 @ 1,187,685 L.R's

TATIC LOAD A-31.4 K#



FATIGUE TEST DATA

SPECIMEN NUMBER: ZWPF-2

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6

RAGE WIDTH: 1.501 1.501 1.501 1.501

RAGE THICKNESS: .376 .378 .377 .376

A: .564 Ral-18627

ELINE STRESS: 34ksi CS-97.12

LOAD: 19,188.78 Apt-768

LES AT TERMINATION/_____

2 Lives/_____

@ 1,189,657 L.R's

TATIC LOAD A-31.45 K#

~~B-31.45 K#~~

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>.03227/.03528</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>.03130</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: ZWIF-3
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 ③ 4 5 6
 RAGE WIDTH: 1.501 1.502 1.507
 RAGE THICKNESS: .375 .376 .374 .376
 A: .563 Rel-18982
 ELINE STRESS: 34 KSI CS-99.1%
Appt-7.66
 . LOAD: 19154.76
 LES AT TERMINATION 2 Lives/

1 @ 1,191,089 L.P.s =
 TATIC LOAD A-32.5 K#
~~32.5 K#~~

FATIGUE TEST DATA

SPECIMEN NUMBER: ZWIF-4
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 ④ 5 6
 RAGE WIDTH: 1.502 1.502 1.502
 RAGE THICKNESS: .374 .376 .374 .376
 A: .562 Rel-17478
 ELINE STRESS: 34 KSI CS-94.8%
Appt-7.44
 . LOAD: 19,099.43 #
 LES AT TERMINATION 2 Lives/

@ 1,191,941 L.P.s =
 TATIC LOAD A-33.0 K#
~~33.0 K#~~

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.01810	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2 Lives

SPECIMEN NUMBER: ZWPF-5

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.500 1.500 1.500 1.500

RAGE THICKNESS: 377 377 377 376

A: .566 kcal - 18652
CS - 96.9%
Appt - 7.70

ELINE STRESS: 34 ksc

LOAD: 19,244.00#

LES AT TERMINATION, ~~REDACTED~~

2 Lives/_____

@ 1,192,559 LBS
TATIC LOAD A-30,65K#

2 Lives

SPECIMEN NUMBER: 2WPF-6

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.4995 1.4995 1.4995 1.4995

PAGE THICKNESS: 378 378 377 378

A: .566 34 ksi CS - 94.0%
TENSILE STRESS: 7.70

ELINE STRESS: 34 KSL

LOAD: 19254.58 #

LES AT TERMINATION ~~XXXXXXXXXX~~

2 Lives/

@ 1,193,160 L.P.'s =
TATIC LOAD A-31.00 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	1600	03673/02795	
39	1560		
38	1520		
37	1480		
36	1440		
35	1400		
34	1360		
33	1320		
32	1280		
31	1240		
30	1200		
29	1160		
28	1120		
27	1080		
26	1040		
25	1000		
24	960		
23	920		
22	880		
21	840		
20	800		
19	760		
18	720		
17	680		
16	640		
15	600		
14	560		
13	520		
12	480		
11	440		
10	400		
9	360		
8	320		
7	280		
6	240		
5	200		
4	160		
3	120		
2	80		
1	40		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	1600	04760/02887	
39	1560		
38	1520		
37	1480		
36	1440		
35	1400		
34	1360		
33	1320		
32	1280		
31	1240		
30	1200		
29	1160		
28	1120		
27	1080		
26	1040		
25	1000		
24	960		
23	920		
22	880		
21	840		
20	800		
19	750		
18	720		
17	680		
16	640		
15	600		
14	560		
13	520		
12	480		
11	440		
10	400		
9	360		
8	320		
7	280		
6	240		
5	200		
4	160		
3	120		
2	80		
1	40		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-7

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6 (88)

RAGE WIDTH: 1.5030 1.5031 1.5029 1.5030

RAGE THICKNESS: .3701 .3707 .3710

A: .5562 CCA 18752

ELINE STRESS: _____ CS 99.1

LOAD: 18912.9 AP 757

LES AT TERMINATION/_____ 1 Life

Lives/_____

@ 1,170,367 LBS

TATIC LOAD A-32.45K#

~~BALL K#~~

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-8

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6 (89)

RAGE WIDTH: 1.5027 1.5026 1.5029 1.5026

RAGE THICKNESS: .3739 .3750 .3727

A: .5618 RC 18627

ELINE STRESS: _____ CS 99.54

LOAD: 19100.7 AP 764

LES AT TERMINATION/_____ 1 Life

Lives/_____

@ 1,163,316 LBS

TATIC LOAD A-32.80 K#

B- K#

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.01504/.00927/.01067	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.02072	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-9

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 90

RAGE WIDTH: 1.4998 1.4998 1.4998 1.4998

RAGE THICKNESS: .3756 .3772 .3733

A: .5632 R Cal. 19882

ELINE STRESS: 34 KSI C S 99.1%

LOAD: 19150.5 AP 766

1 Life

LES AT TERMINATION/

Lives/

@ 1,162,531 L.P.'s =
TATIC LOAD A-32.90 K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 15

RAGE WIDTH: 1.5016 1.5016 1.5016 1.5016

RAGE THICKNESS: .3738 .3744 .3732

A: .5613 I. Cal. 18478

ELINE STRESS: _____ C S 97%

LOAD: 19084.1 AP 767

1 Life

LES AT TERMINATION/

Lives/

@ 1,161,504 L.P.'s =
TATIC LOAD A-29.60 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16300	.00445	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.08597/.03775	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-11

SPECTRUM: Fighter

TEST DATE: 7-5-77

TEST FRAME: (1) 2 3 4 5 6

RAGE WIDTH: 1.499 1.499 1.499 1.499

RAGE THICKNESS: 375 374 375 375

A: 562 RCul - 12752

ELINE STRESS: 34ki CS - 98.1

LOAD: 19112-25 Apt - 765

LES AT TERMINATION/FAILURE:

1.5 Lives/

1148621 LPs

TATIC LOAD A-33.60 K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-12

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5 6

RAGE WIDTH: 1.501 1.501 1.501 1.501

RAGE THICKNESS: 374 376 376 376

A: 564 RCul - 12627

ELINE STRESS: 34kud CS - 97.1

LOAD: 19118-78 Apt - 768

LES AT TERMINATION/FAILURE:

2 Lives/

1148621

TATIC LOAD A-33.05 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>902/1</u>	
39	15600	<u>700-5074</u>	
38	15200	<u>To measure</u>	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>902/1</u>	
39	15600	<u>700-5074</u>	
38	15200	<u>To measure</u>	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-13

SPECTRUM: Fighter

TEST DATE: 7-5-77

TEST FRAME: 1 2 ③ 4 5 6

RAGE WIDTH: 1.50 2 1.50 1.50 1.50

RAGE THICKNESS: .372 .372 .372 .371

A: .557 Rel - 18982
C.S. - 99.9
Apt - 7.60

ELINE STRESS: 34

LOAD: 18997.3

LES AT TERMINATION/

1.5 Lives/

@ 1,148,621 L.P.s =

TATIC LOAD A-33.00 K#

~~XXXXXXXXXX~~

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-14

SPECTRUM: Fighter

TEST DATE: 7-5-77

TEST FRAME: 1 2 3 ④ 5 6

RAGE WIDTH: 1.50 5 1.50 1.50 1.50

RAGE THICKNESS: .374 .374 .375 .374

A: .561 Rel - 18475
C.S. - 96.8
Apt - 7.63

ELINE STRESS: 34

LOAD: 19086.7

LES AT TERMINATION/

1.5 Lives/

@ 1,148,621 L.P.

TATIC LOAD A-32.5 K#

~~XXXXXXXXXX~~

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FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.6013	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0207 / .0650	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-15

SPECTRUM: Fighter

TEST DATE: 7-5-77

TEST FRAME: 1 2 3 4 ⑤ 6

RAGE WIDTH: 1.52 1.582 1.52

RAGE THICKNESS: .377 .377 .377 .376

A: .566 Rad - 18652
c.s - 96.9
Appt - 7.70

ELINE STRESS: 19252-6

LOAD: _____

LES AT TERMINATION: _____

1.5 Lives/ _____

@ 1,148,621 L.P.s =
TATIC LOAD A-33.70 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	1.007	
39	15600	1.007	
38	15200	1.007	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-16

SPECTRUM: Fighter

TEST DATE: 7-5-77

TEST FRAME: 1 2 3 4 5 ⑥

RAGE WIDTH: 1.500 1.300 1.500 1.500

RAGE THICKNESS: .377 .377 .377 .376

A: .585 Rad - 18094
c.s - 94.2
Appt - 7.68

ELINE STRESS: 19252-6

LOAD: 19201-5

LES AT TERMINATION: _____

1.5 Lives/ _____

@ 1,148,621 L.P.s =
TATIC LOAD A-33.55 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	1.007	
39	15600	1.007	
38	15200	1.007	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-17

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.5025 / 1.5025 / 1.5025

RAGE THICKNESS: .3730 / .3715 / .3744

A: .5604 RCal 10752

ELINE STRESS: 34ksc CS 98.4

. LOAD: 190522 AP 762

1 Life

LES AT TERMINATION/~~FAILURE~~:

3 Lives/

@ 1,165,770 L.R's

TATIC LOAD A-33.1 K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-18

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.5023 / 1.5023 / 1.5023

RAGE THICKNESS: .3764 / .3769 / .3758

A: .5654 RCal 10627

ELINE STRESS: 34ksc CS 96.9

. LOAD: 19223.3 AP 770

1 Life

LES AT TERMINATION/~~FAILURE~~:

3 Lives/

@ 1,148,621 L.R's

TATIC LOAD A-33.3 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>1.0287</u>	<u>0.017</u>
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>1.0287</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-19

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (90)

RAGE WIDTH: 1.5002 / 1.5002 / 1.5001

RAGE THICKNESS: 1.3724 / 1.3734 / 1.3713

A: .5586

Rcal 6362

CS 99.9

AP 7.4

ELINE STRESS: 34 ksi

. LOAD: 189924

1 Life

LES AT TERMINATION/FUTURE:

2 Lives/ _____

@ 1,169,144 P.S. =

TATIC LOAD A-33.4 K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-20

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (15)

RAGE WIDTH: 1.5014 / 1.5014 / 1.5014

RAGE THICKNESS: 1.3769 / 1.3763 / 1.3774

A: .5658

Rcal 18472

CS 96.1

AP 7.7

ELINE STRESS: 34 ksi

. LOAD: 192373

1 Life

LES AT TERMINATION/FUTURE:

2 Lives/ _____

@ 1,160,667 P.S. =

TATIC LOAD A-32.7 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>1.00</u> <u>SMALL</u> <u>TS</u>	<u>0.0010</u>
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>0.057</u> <u>1.057</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-21

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.4992 / 1.4992 / 1.4991

RAGE THICKNESS: .3764 / .3755 / .3772

A: .5642

RCAI 18452

CS 972

AR 767

ELINE STRESS: 34ksi

. LOAD: 19183.6

1 Life

LES AT TERMINATION/

4 Lives/

@ 1,159,423 L.P.S. =

TATIC LOAD A-33.05K#

~~117~~

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>a</u> / <u>c</u> <u>.025</u> / <u>.0234</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-22

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.5034 / 1.5035 / 1.5033

RAGE THICKNESS: .3776 / .3767 / .3784

A: .5676

RCAI 18034

CS 938

AR 772

ELINE STRESS: 34ksi

. LOAD: 19298.7

1 Life

LES AT TERMINATION/

4 Lives/

@ 1,158,044 L.P.S. =

TATIC LOAD A-32.8 K#

~~117~~

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>a</u> / <u>c</u> <u>.0084</u> / <u>.0211</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

117

113

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZLPP-25

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 6 ①90

RAGE WIDTH: 1.4977

RAGE THICKNESS: .3743 .3745/.3720

A: .5605 RCAI 13302
C = 99.6

ELINE STRESS: 34 ksi AP 702

. LOAD: 19057.5

LES AT TERMINATION/_____

2 Lives/_____

1 @ 1,270,003 L.R.'s =

TATIC LOAD A-33.0 K#

~~1.5015~~

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZLPP-26

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5 6 ①15

RAGE WIDTH: 1.5015

RAGE THICKNESS: .3740 .3766/.3714

A: .5616 RCAI 13403
C = 99.2

ELINE STRESS: 34 ksi AP 704

LOAD: 19093.1

LES AT TERMINATION/_____

2 Lives/_____

@ 1,272,447 L.R.'s =

TATIC LOAD A-33.35 K#

~~1.5015~~

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0023 / .0240	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	700 5.6411 70 20012	
39	15600	in data	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACROGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-27

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: _____

AVERAGE WIDTH: 1.5027

AVERAGE THICKNESS: 3794 3772/.3815

AREA: .5700 R CAL 18652

BASLINE STRESS: 34Ksi CAL SWING 962

MAX. LOAD: 19381.7 # A POT 7.75 1 Life

CYCLES AT TERMINATION: _____

2 Lives/

@ 1,269,892 L.P.s = 13266.96 FLT-Hrs

STATIC LOAD

A-33.3 K#

B- K#

.0292



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600	.0235	.0022
33	13200	.0213	.0014
32	12800	.0194	.0017
31	12400	.0177	.0017
30	12000	.0160	.0015
29	11600	.0145	.0013
28	11200	.0132	.0014
27	10800	.0118	.0013
26	10400	.0105	.0014
25	10000	.0091	.0009
24	9600	.0082	.0010
23	9200	.0072	.0008
22	8800	.0064	.0007
21	8400	.0057	.0008
20	8000	.0049	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-28

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 17

RAGE WIDTH: 1.5020

RAGE THICKNESS: 3747 3728/.3766

A: .5628 R CAL 18000

ELINE STRESS: 34Ksi CAL SWING 925

. LOAD: 19135.2 1 Life

LES AT TERMINATION: _____

2 Lives/

@ 1,268,893 L.P.s = 13256.26 FLT-Hrs

TATIC LOAD A-32.9 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0199	.0015
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600	.0178	.0006
33	13200	.0172	.0014
32	12800	.0158	.0020
31	12400	.0138	.0019
30	12000	.0119	.0016
29	11600	.0103	.0015
28	11200	.0088	.0014
27	10800	.0074	.0011
26	10400	.0063	.0010
25	10000	.0053	.0009
24	9600	.0048	.0008
23	9200	.0040	.0007
22	8800	.0033	.0005
21	8400	.0028	.0003
20	8000	.0025	.0002
19	7600	.0023	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

120

116

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-29

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (1) 2 3 4 5 6

RAGE WIDTH: 1.5012

RAGE THICKNESS: .3778 .3779/.3777

A: .5672 RCAL 18752

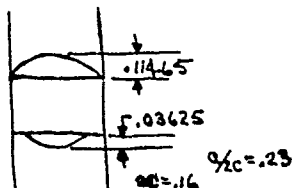
ELINE STRESS: 34ksi CS 97%

LOAD: 19283.2 A-R 7.7'

LES AT TERMINATION/_____

2 Lives/✓

TATIC LOAD A-28.6 K#



FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ZWPF-30

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5 6 (69)

RAGE WIDTH: 1.5006

RAGE THICKNESS: .3764 .3750/.3778

A: .5648 RCAL 18627

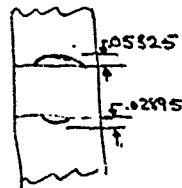
ELINE STRESS: 34ksi CS 97%

LOAD: 19204.1 A-R 7.08

LES AT TERMINATION/_____

2 Lives/✓

TATIC LOAD A-30.60 K#



FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1124	.0124
39	15500	.1008	.0107
38	15200	.0901	.0096
37	14800	.0805	.0077
36	14400	.0728	.0073
35	14000	.0655	.0063
34	13600	.0592	.0055
33	13200	.0537	.0049
32	12800	.0488	.0047
31	12400	.0441	.0041
30	12000	.0400	.0042
29	11600	.0357	.0037
28	11200	.0321	.0035
27	10800	.0284	.0032
26	10400	.0253	.0027
25	10000	.0225	.0029
24	9600	.0196	.0026
23	9200	.0170	.0022
22	8800	.0149	.0021
21	8400	.0127	.0017
20	8000	.0110	.0017
19	7600	.0093	.0016
18	7200	.0077	.0013
17	6800	.0064	.0009
16	6400	.0055	.0007
15	6000	.0048	.0009
14	5600	.0039	.0007
13	5200	.0031	.0007
12	4800	.0024	.0007
11	4400	.0017	.0005
10	4000	.0013	.0004
9	3600	.0008	.0003
8	3200	.0005	.0003
7	2800	.0002	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0504	.0054
39	15600	.0450	.0043
38	15200	.0407	.0041
37	14800	.0366	.0033
36	14400	.0333	.0033
35	14000	.0300	.0035
34	13600	.0265	.0032
33	13200	.0232	.0025
32	12800	.0208	.0024
31	12400	.0184	.0019
30	12000	.0165	.0017
29	11600	.0148	.0017
28	11200	.0131	.0014
27	10800	.0117	.0016
26	10400	.0102	.0011
25	10000	.0091	.0013
24	9600	.0078	.0010
23	9200	.0068	.0010
22	8800	.0058	.0008
21	8400	.0050	.0006
20	8000	.0044	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2.2 TAST, II
2.2.1 XWPF

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XWPF-1A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6

RAGE WIDTH: 1.5004 1.5013 1.5006 1.4992 1.5003

RAGE THICKNESS: .3815 .3816 .3815 .3813 .3817 .3812

A: .5723 Rcal 18752

ELINE STRESS: CS 96.4

LOAD: 19459.6

1 Life

LES AT TERMINATION/

2 Lives/

TATIC LOAD A-15.64 K#
B-16.40 K#



ORIGIN LIES ON RADIUS OF BROKEN
CORNER. Fatigue ORIGINATES AT THE BASE
OF A SLIVER.

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XWPF-2A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6

RAGE WIDTH: 1.5024 1.5035 1.5028 1.5025 1.5018

RAGE THICKNESS: .3822 .3822 .3808 .3818 .3808 .3838

A: .5742 R cal. 18627

ELINE STRESS: 34KSL CS 95.4

LOAD: 19521.3

1 Life

LES AT TERMINATION/FAILURE:

2 Lives/

TATIC LOAD A-13.90 K#
B-13.72 K#



ORIGIN LIES ON CHAMFERED CORNER
SURFACE NEAR BOLT HOLE/CHAMFER
TRANSITION. ORIGIN STARTS FROM THE
BASE OF A SLIVER. 122

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0910	.0077
39	15600	.0833	.0051
38	15200	.0782	.0052
37	14800	.0730	.0043
36	14400	.0691	.0043
35	14000	.0648	.0037
34	13600	.0611	.0037
33	13200	.0574	.0036
32	12800	.0538	.0033
31	12400	.0505	.0035
30	12000	.0470	.0032
29	11600	.0438	.0025
28	11200	.0413	.0027
27	10800	.0386	.0028
26	10400	.0358	.0021
25	10000	.0337	.0019
24	9600	.0318	.0025
23	9200	.0293	.0023
22	8800	.0270	.0020
21	8400	.0250	.0017
20	8000	.0235	.0017
19	7600	.0216	.0021
18	7200	.0195	.0023
17	6800	.0177	.0021
16	6400	.0151	.0020
15	6000	.0131	.0019
14	5600	.0112	.0017
13	5200	.0095	.0014
12	4800	.0081	.0013
11	4400	.0068	.0012
10	4000	.0056	.0011
9	3600	.0045	.0013
8	3200	.0032	.0016
7	2800	.0026	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1739	.0179
39	15600	.1560	.0170
38	15200	.1390	.0158
37	14800	.1232	.0127
36	14400	.1105	.0120
35	14000	.0985	.0085
34	13600	.0900	.0096
33	13200	.0804	.0093
32	12800	.0711	.0078
31	12400	.0633	.0069
30	12000	.0564	.0057
29	11600	.0507	.0056
28	11200	.0451	.0049
27	10800	.0402	.0051
26	10400	.0351	.0045
25	10000	.0306	.0054
24	9600	.0252	.0032
23	9200	.0220	.0028
22	8800	.0192	.0026
21	8400	.0166	.0018
20	8000	.0148	.0026
19	7600	.0122	.0011
18	7200	.0111	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: XW PF-3

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (10)

RAGE WIDTH: 1.5081 1.5024 1.5020 1.5016 1.5027

RAGE THICKNESS: .3752 .3745 .3738 .3736 .3767 .3773

EA: .5658

R CAL 18982

CS 986

A.P. 770

ELINE STRESS: _____

LOAD: 19237.5

1 Life

LES AT FAILURE: *

2 Lives/ _____

@ 1493, 815 H.P.s = 15606.36 FLT-HRS *

TATIC LOAD

A- ~~K#~~

B- ~~K#~~

ORIGIN LIES ON BOLT HOLE SURFACE.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40		.6300	
39	15600	.6300	.2377
38	15200	.3923	.0515
37	14800	.3408	.0405
36	14400	.3003	.0348
35	14000	.2655	.0257
34	13600	.2398	.0256
33	13200	.2142	.0236
32	12800	.1906	.0216
31	12400	.1690	.0209
30	12000	.1481	.0204
29	11600	.1277	.0191
28	11200	.1086	.0176
27	10800	.0910	.0174
26	10400	.0736	.0122
25	10000	.0614	.0102
24	9600	.0512	.0085
23	9200	.0427	.0077
22	8800	.0350	.0053
21	8400	.0297	.0044
20	8000	.0253	.0038
19	7600	.0215	.0029
18	7200	.0186	.0036
17	6800	.0150	.0026
16	6400	.0124	.0021
15	6000	.0103	.0020
14	5600	.0083	.0017
13	5200	.0066	.0012
12	4800	.0054	.0009
11	4400	.0045	.0008
10	4000	.0037	.0009
9	3600	.0028	.0005
8	3200	.0023	.0008
7	2800	.0018	.0004
6	2400	.0014	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XW PF-4B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (13)

RAGE WIDTH: 1.5013 1.5007 1.5004 1.5007 1.5022

RAGE THICKNESS: .3863 .3851 .3840 .3853 .3883 .3890

A: .5800

R CAL 18478

CS 93.6

A.P. 789

ELINE STRESS: 34 KSI

LOAD: 19720.4

1 Life

LES AT TERMINATION/FAILURE:

2 Lives/ _____

TATIC LOAD A-16.56 K#

B-13.77 K#

ORIGIN LIES FROM BOLT HOLE SURFACE.
MATING PLATE SURFACE WERE MILLED.

ORIGIN LIES 0.0006 IN.
BELOW BOLT HOLE SURFACE

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1034	.0132
39	15600	.0902	.0126
38	15200	.0776	.0102
37	14800	.0676	.0098
36	14400	.0578	.0087
35	14000	.0491	.0074
34	13600	.0417	.0056
33	13200	.0361	.0047
32	12800	.0314	.0040
31	12400	.0274	.0046
30	12000	.0228	.0041
29	11600	.0187	.0026
28	11200	.0161	.0025
27	10800	.0136	.0020
26	10400	.0116	.0014
25	10000	.0102	.0014
24	9600	.0088	.0015
23	9200	.0073	.0008
22	8800	.0065	.0008
21	8400	.0057	.0007
20	8000	.0050	.0006
19	7600	.0044	.0003
18	7200	.0041	.0004
17	6800	.0037	.0004
16	6400	.0033	.0003
15	6000	.0030	.0003
14	5600	.0027	.0002
13	5200	.0025	.0002
12	4800	.0023	.0002
11	4400	.0021	.0002
10	4000	.0019	.0002
9	3600	.0017	.0002
8	3200	.0015	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XWPF-5B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (16)

RAGE WIDTH: 1.5011 1.5012 1.5012 1.5012 1.5013

RAGE THICKNESS: .3833 .3827 .3822 .3833 .3840 .3844

A: .5754 RCA 10652

ELINE STRESS: 34KSI CS 953

. LOAD: 19563.7 AP 783

LES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-15.54 K#
B-13.24 K#



ORIGIN LIES ON BOLT HOLE SURFACE
INITIATION SITE WAS AT THE BASE OF
A SLIVER.

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF6A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90

AVERAGE WIDTH: 1.5007 1.5012 1.5009 1.5005 1.5002

AVERAGE THICKNESS: .3740 .3752 .3734 .3753 .3732 .3720

AREA: .5613 RCAL. 18982

BASLINE STRESS: 24KSI CALS 99%

MAX. LOAD: 19283 A.POT. 76.3

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-15.85 K#
B-16.92 K#



ORIGIN LIES AT CORNER
THE CORNER HAD A TOOLED RADIUS

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0992	.0104
39	15600	.0888	.0078
38	15200	.0810	.0083
37	14800	.0727	.0074
36	14400	.0653	.0055
35	14000	.0598	.0063
34	13600	.0535	.0046
33	13200	.0480	.0046
32	12800	.0443	.0042
31	12400	.0401	.0037
30	12000	.0364	.0036
29	11600	.0328	.0041
28	11200	.0287	.0023
27	10800	.0264	.0027
26	10400	.0237	.0020
25	10000	.0217	.0014
24	9600	.0203	.0022
23	9200	.0181	.0023
22	8800	.0158	.0022
21	8400	.0136	.0018
20	8000	.0118	.0017
19	7600	.0101	.0014
18	7200	.0087	.0022
17	6800	.0065	.0009
16	6400	.0056	.0008
15	6000	.0048	.0005
14	5600	.0043	.0007
13	5200	.0036	.0004
12	4800	.0032	.0005
11	4400	.0027	.0004
10	4000	.0023	.0003
9	3600	.0020	.0003
8	3200	.0017	.0002
7	2800	.0015	.0002
6	2400	.0013	.0002
5	2000	.0011	.0001
4	1600	.0010	
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000	.0670	.0051
39	15600	.0616	.0041
38	15200	.0575	.0038
37	14800	.0537	.0043
36	14400	.0494	.0040
35	14000	.0454	.0038
34	13600	.0416	.0036
33	13200	.0380	.0031
32	12800	.0349	.0029
31	12400	.0320	.0028
30	12000	.0292	.0026
29	11600	.0266	.0033
28	11200	.0233	.0025
27	10800	.0208	.0021
26	10400	.0187	.0018
25	10000	.0169	.0019
24	9600	.0150	.0020
23	9200	.0130	.0018
22	8800	.0112	.0019
21	8400	.0093	.0012
20	8000	.0081	.0013
19	7600	.0068	.0009
18	7200	.0061	.0006
17	6800	.0055	.0008
16	6400	.0047	.0006
15	6000	.0041	.0006
14	5600	.0035	.0005
13	5200	.0030	.0004
12	4800	.0026	.0005
11	4400	.0021	.0003
10	4000	.0018	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: XW OF 7A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15

AVERAGE WIDTH: 1.4926 1.4923 1.4923 1.4979 1.4978

AVERAGE THICKNESS: .3744 .3763 .3737 .3768 .3726 .3727

AREA: .5611 RCAL: 18478

BASELINE STRESS: 2416 CALS: 97%

MAX. LOAD: 19076 A-POT: 7.63

CYCLES AT / FAILURE:

2 Lives/ _____

1 @ 1,366,705 L.P.S = 14,278.4 FLT-HRS*

STATIC LOAD A- K#

B- K#

ORIGIN LIES AT THE BASE OF A SLIVER FROM THE BOLT HOLE SURFACE. MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000		
39	15600		
38	15200		
37	14800		
36	14400	.4200	0977
35	14000	32.29	0517
34	13600	27.12	0385
33	13200	23.27	0314
32	12800	20.13	0149
31	12400	18.64	0305
30	12000	15.59	0182
29	11600	13.77	0155
28	11200	12.22	0124
27	10800	10.98	0136
26	10400	09.62	0113
25	10000	08.49	0106
24	9600	07.43	0112
23	9200	06.31	0094
22	8800	05.37	0107
21	8400	04.30	0085
20	8000	03.45	0065
19	7600	02.80	0069
18	7200	02.11	0050
17	6800	01.61	0026
16	6400	01.35	0022
15	6000	01.13	0025
14	5600	00.88	0019
13	5200	00.69	0015
12	4800	00.54	0029
11	4400	00.45	0007
10	4000	00.38	0008
9	3600	00.30	0005
8	3200	00.25	0005
7	2800	00.20	0005
6	2400	00.15	0005
5	2000	00.10	
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XWPF-8B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 15

RAGE WIDTH: 1.5021 1.5028 1.5022 1.5011 1.5024

RAGE THICKNESS: .3769 .3773 .3765 .3774 .3761 .3768

A: .5661 RCAL: 18478

ELINE STRESS: 34 KSC CS: 960

. LOAD: 19247.8 AR: 770

LES AT TERMINATION/

2 Lives/ _____

@ 1,072,452 L.P.S = 11,204.24 FLT-HRS

TATIC LOAD A- 16.27 K#

B- 16.30 K#

ORIGIN LIES AT BOLT HOLE/MATING SURFACE CORNER. MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600	.0558	.0009
28	11200	05.49	0062
27	10800	04.87	0042
26	10400	04.45	0050
25	10000	03.95	0046
24	9600	03.49	0040
23	9200	03.09	0030
22	8800	02.79	0032
21	8400	02.47	0027
20	8000	02.20	0030
19	7600	01.90	0022
18	7200	01.68	0018
17	6800	01.50	0019
16	6400	01.31	0015
15	6000	01.16	0014
14	5600	01.02	0015
13	5200	00.87	0012
12	4800	00.75	0012
11	4400	00.63	0013
10	4000	00.50	0011
9	3600	00.39	0007
8	3200	00.32	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XMPF-9A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑥ 17

AVERAGE WIDTH: 1.5018 1.5025 1.5018 1.5009 1.5018

AVERAGE THICKNESS: .3841 .3847 .3831 .3842 .3850 .3837

A: .5769 R.CAL 18094

ELINE STRESS: 34KSI C.S. 923

LOAD: 19614.6 A.P. 7.85 1 Life

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-10.26 K#
B-14.79 K#



ORIGIN LIES ON BOLT HOLE SURFACE
DUE TO MFG. DEFECT.

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.3149	.0322
39	15600	.2827	.0272
38	15200	.2555	.0226
37	14800	.2329	.0205
36	14400	.2124	.0181
35	14000	.1943	.0160
34	13600	.1783	.0136
33	13200	.1647	.0149
32	12800	.1498	.0126
31	12400	.1372	.0119
30	12000	.1253	.0108
29	11600	.1145	.0106
28	11200	.1039	.0099
27	10800	.0940	.0099
26	10400	.0841	.0093
25	10000	.0748	.0082
24	9600	.0666	.0082
23	9200	.0584	.0088
22	8800	.0496	.0070
21	8400	.0426	.0056
20	8000	.0370	.0060
19	7600	.0310	.0062
18	7200	.0248	.0047
17	6800	.0201	.0049
16	6400	.0152	.0036
15	6000	.0116	.0026
14	5600	.0090	.0021
13	5200	.0069	.0016
12	4800	.0053	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XMPF-10A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90

AVERAGE WIDTH: 1.5014 1.5014 1.5014 1.5016 1.5012

AVERAGE THICKNESS: .3801 .3801 .3788 .3794 .3814 .3806

A AREA: .5706 R.CAL. 18982

BASELINE STRESS: 34K C.A.L.S. 98%

MAX. LOAD: 19401.2 A.P.O.T. 7.76

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-14.44 K#
B-14.74 K#



ORIGIN LIES AT BASE OF A
SLIVER FROM BOLT HOLE.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000	.1024	.0160
39	15600	.0844	.0131
38	15200	.0713	.0126
37	14800	.0587	.0096
36	14400	.0491	.0086
35	14000	.0405	.0061
34	13600	.0344	.0064
33	13200	.0280	.0050
32	12800	.0230	.0041
31	12400	.0189	.0034
30	12000	.0155	.0024
29	11600	.0131	.0018
28	11200	.0113	.0013
27	10800	.0100	.0015
26	10400	.0085	.0011
25	10000	.0074	.0012
24	9600	.0062	.0010
23	9200	.0052	.0006
22	8800	.0046	.0005
21	8400	.0041	.0004
20	8000	.0037	.0004
19	7600	.0033	.0003
18	7200	.0030	.0002
17	6800	.0028	.0003
16	6400	.0025	.0002
15	6000	.0023	.0003
14	5600	.0020	.0001
13	5200	.0019	.0001
12	4800	.0018	.0002
11	4400	.0016	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-11B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: E

AVERAGE WIDTH: 1.5037 1.5036 1.5043 1.5035 1.5039

AVERAGE THICKNESS: .3026 .3032 .3018 .3030 .3029 .3022

AREA: .5753 RCAL 18052

BASILINE STRESS: 34 KSC CAL 95%

MAX. LOAD: 19561 A.POT. 202

CYCLES AT TERMINATION/2 Lives

STATIC LOAD A-15.42 K#
B-13.31 K#

ORIGIN LIES ON HOLE SURFACE NEAR CHAMFER CORNER.

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XWPF-12B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (90)

RAGE WIDTH: 1.4997 1.4993 1.4992 1.5001 1.5001

RAGE THICKNESS: .3773 .3786 .3761 .3796 .3760 .3762

A: .5658 RCAL 10982

ELINE STRESS: 34 KSC CS 98.7

. LOAD: 19238.5 AP 7.70

LES AT TERMINATION/1 Life

2 Lives/

1 @ 1,073,986 L.P.S. = 11,220.27 FLT.HRS.

STATIC LOAD A-16.72 K#
B-16.64 K#

ORIGIN LIES ON CHAMFER/BOLT HOLE CORNER.
MATING SURFACES WERE MILLED.

FRACTOGRAPHIC DATA

BLK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1333	.0116
39	15600	.1217	.0127
38	15200	.1090	.0091
37	14800	.0999	.0080
36	14400	.0919	.0074
35	14000	.0845	.0072
34	13600	.0773	.0069
33	13200	.0704	.0066
32	12800	.0638	.0056
31	12400	.0582	.0053
30	12000	.0529	.0050
29	11600	.0479	.0062
28	11200	.0417	.0054
27	10800	.0363	.0044
26	10400	.0319	.0049
25	10000	.0270	.0042
24	9600	.0228	.0037
23	9200	.0191	.0033
22	8800	.0158	.0027
21	8400	.0131	.0029
20	8000	.0102	.0018
19	7600	.0084	.0017
18	7200	.0067	.0013
17	6800	.0054	.0007
16	6400	.0047	.0005
15	6000	.0042	.0006
14	5600	.0036	.0004
13	5200	.0032	.0003
12	4800	.0029	.0004
11	4400	.0025	.0004
10	4000	.0021	.0004
9	3600	.0017	.0003
8	3200	.0014	.0002
7	2800	.0012	.0002
6	2400	.0010	.0002
5	2000	.0008	.0002
4	1600	.0006	.0002
3	1200	.0004	.0001
2	800	.0003	
1	400		

BLK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600	.0428	.0056
28	11200	.0372	.0039
27	10800	.0333	.0038
26	10400	.0295	.0032
25	10000	.0263	.0036
24	9600	.0227	.0042
23	9200	.0185	.0025
22	8800	.0160	.0024
21	8400	.0136	.0024
20	8000	.0112	.0014
19	7600	.0097	.0017
18	7200	.0081	.0012
17	6800	.0069	.0012
16	6400	.0057	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

123

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XWPF-13A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.509 1.496 1.494 1.502 1.503

RAGE THICKNESS: .3769 .3757 .3777 .3755 .3795 .3793

A: .5657 RCAL 18652

ELINE STRESS: 34 KSC CS 970

LOAD: 19235.5 AF 770

LES AT TERMINATION/

2 Lives/

1 @ 1,071,321 L.P.s = 11,192.43 FLT-HRS

TATIC LOAD A- 16.41 K#

B-17.32 K#

ORIGIN LIES ON BOLT HOLE SURFACE.
MATING SURFACES WERE MILLED.

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-14B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 6

AVERAGE WIDTH: 1.5028 1.5016 1.5034 1.5028 1.5023

AVERAGE THICKNESS: .3785 .3797 .3778 .3779 .3788 .3785

A REA: .5689 RCAL: 17925

BASELINE STRESS: 34 KSC CALS. 03%

MAX. LOAD: 19342 A.POT. 774

CYCLES AT FAILURE: *

2 Lives/

@ 1,225,811 L.P.s = 12,806.43 FLT-HRS*

STATIC LOAD A- K#

B- K#

ORIGIN LIES ON BOLT HOLE SURFACE.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	.0190	.0016
27	10800	.0174	.0025
26	10400	.0149	.0024
25	10000	.0125	.0017
24	9600	.0103	.0014
23	9200	.0094	.0012
22	8800	.0082	.0014
21	8400	.0068	.0009
20	8000	.0059	.0009
19	7600	.0050	.0005
18	7200	.0045	.0006
17	6800	.0039	.0004
16	6400	.0035	.0003
15	6000	.0032	.0007
14	5600	.0025	.0003
13	5200	.0022	.0005
12	4800	.0017	.0002
11	4400	.0015	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200	.1764	.0024
32	12800	.1740	.0636
31	12400	.1704	.0390
30	12000	.1714	.0302
29	11600	.1712	.0347
28	11200	.1665	.0055
27	10800	.1710	.0024
26	10400	.0086	.0014
25	10000	.0072	.0013
24	9600	.0059	.0010
23	9200	.0049	.0011
22	8800	.0038	.0010
21	8400	.0028	.0002
20	8000	.0026	.0002
19	7600	.0024	.0002
18	7200	.0022	.0001
17	6800	.0021	.0001
16	6400	.0020	.0001
15	6000	.0019	.0001
14	5600	.0018	.0001
13	5200	.0017	.0001
12	4800	.0016	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-15B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15

AVERAGE WIDTH: 1.5009 1.5008 1.5010 1.5012 1.5007

AVERAGE THICKNESS: .3794 .3821 .3762 .3821 .3785 .3780

AREA: .5694 REAL 18478

BASLINE STRESS: 34ksi CALS 95%

MAX. LOAD: 19359.9 A.POT. 77V

CYCLES AT TERMINATION/_____

2 Lives/_____

1

STATIC LOAD A-12.50 K#

B-11.50 K#



ORIGIN LIES AT BASE OF
SLIVER FROM BOLT HOLE
SURFACE.

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XWPF-16A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 17

RAGE WIDTH: 1.4990 1.4997 1.4995 1.4984 1.4985

RAGE THICKNESS: .3802 .3785 .3795 .3790 .3816 .3823

A: .5699 REAL 18094

ELINE STRESS: 34ksi CS 93.1

LOAD: 19377.3 AP 77.5

1 Life

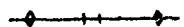
LES AT TERMINATION/_____

2 Lives/_____

1 @ 1,069,172 L.P.S = 11,169.98 Ft.-HRS

STATIC LOAD A-16.45 K#

B-17.27 K#



ORIGIN LIES ON BOLT HOLE SURFACE
MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000	.2665	.0272
39	15600	.2393	.0245
38	15200	.2148	.0224
37	14800	.1924	.0201
36	14400	.1723	.0178
35	14000	.1545	.0176
34	13600	.1369	.0149
33	13200	.1222	.0147
32	12800	.1073	.0133
31	12400	.0940	.0115
30	12000	.0825	.0095
29	11600	.0730	.0077
28	11200	.0653	.0071
27	10800	.0582	.0074
26	10400	.0508	.0068
25	10000	.0440	.0053
24	9600	.0387	.0062
23	9200	.0325	.0043
22	8800	.0282	.0041
21	8400	.0241	.0051
20	8000	.0190	.0029
19	7600	.0161	.0021
18	7200	.0140	.0021
17	6800	.0119	.0019
16	6400	.0100	.0014
15	6000	.0086	.0012
14	5600	.0074	.0011
13	5200	.0063	.0011
12	4800	.0052	.0008
11	4400	.0044	.0007
10	4000	.0037	.0005
9	3600	.0032	.0006
8	3200	.0026	.0005
7	2800	.0021	.0004
6	2400	.0017	.0003
5	2000	.0014	.0003
4	1600	.0011	.0002
3	1200	.0009	
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	.0335	.0047
27	10800	.0288	.0038
26	10400	.0250	.0034
25	10000	.0216	.0028
24	9600	.0188	.0024
23	9200	.0164	.0019
22	8800	.0150	.0017
21	8400	.0133	.0017
20	8000	.0116	.0016
19	7600	.0100	.0012
18	7200	.0088	.0011
17	6800	.0077	.0010
16	6400	.0067	.0007
15	6000	.0060	.0010
14	5600	.0050	.0007
13	5200	.0043	.0008
12	4800	.0035	.0004
11	4400	.0031	.0003
10	4000	.0028	.0005
9	3600	.0023	.0003
8	3200	.0020	.0004
7	2800	.0016	.0003
6	2400	.0013	.0002
5	2000	.0011	
4	1600		
3	1200		
2	800		
1	400		

(1.25)

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-17B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90

AVERAGE WIDTH: 1.5018 1.5015 1.5024 1.5016 1.5018

AVERAGE THICKNESS: .3837 .3834 .3837 .3840 .3834 .3838

AREA: .5762 RCAL-18982

BASLINE STRESS: 34 KSI CALS 97%

MAX. LOAD: 19592 A.POT. 784

CYCLES AT TERMINATION/FAILURE: 2 Lives/

STATIC LOAD A-14.93 K#
B-15.1 K#
ORIGINS LIE ON
BOLT HOLE SURFACE
FROM CIRCUMFERENTIAL TOOL MARKS.

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-18A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15

AVERAGE WIDTH: 1.4996 1.4987 1.4982 1.5002 1.5013

AVERAGE THICKNESS: .3772 .3776 .3766 .3779 .3775 .3773

AREA: .5056 RCAL-18478

BASLINE STRESS: 34 KSI CALS 96%

MAX. LOAD: 19231 A.POT. 770

CYCLES AT FAILURE: 130

2 Lives/
@ 6417, 246 L.P.S. = 14,806.42 FLY-HRS*

STATIC LOAD A- K#
B- K#
ORIGINS LIES ON BOLT
HOLE SURFACE STARTING
FROM IMPROPERLY DRILLED
HOLE (TOOL-DRM)
MATING SURFACES WERE
MILLED.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1316	.0139
39	15600	.1177	.0145
38	15200	.1032	.0101
37	14800	.0931	.0099
36	14400	.0832	.0118
35	14000	.0714	.0106
34	13600	.0608	.0098
33	13200	.0510	.0075
32	12800	.0435	.0055
31	12400	.0380	.0048
30	12000	.0332	.0042
29	11600	.0290	.0039
28	11200	.0251	.0028
27	10800	.0223	.0021
26	10400	.0202	.0025
25	10000	.0178	.0020
24	9600	.0158	.0018
23	9200	.0148	.0019
22	8800	.0121	.0019
21	8400	.0102	.0012
20	8000	.0090	.0012
19	7600	.0078	.0015
18	7200	.0063	.0012
17	6800	.0057	.0010
16	6400	.0041	.0008
15	6000	.0033	.0009
14	5600	.0024	.0004
13	5200	.0020	.0003
12	4800	.0017	.0004
11	4400	.0013	.0001
10	4000	.0012	.0002
9	3600	.0010	.0002
8	3200	.0008	.0002
7	2800	.0006	.0002
6	2400	.0004	.0001
5	2000	.0003	.0001
4	1600	.0002	.0001
3	1200	.0001	
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38		.3690	.0025
37	14800	.3665	.0086
36	14400	.2979	.0394
35	14000	.2585	.0320
34	13600	.2265	.0283
33	13200	.1982	.0229
32	12800	.1753	.0206
31	12400	.1547	.0165
30	12000	.1382	.0152
29	11600	.1230	.0161
28	11200	.1069	.0126
27	10800	.0943	.0113
26	10400	.0830	.0099
25	10000	.0731	.0085
24	9600	.0646	.0083
23	9200	.0563	.0073
22	8800	.0490	.0060
21	8400	.0430	.0050
20	8000	.0380	.0056
19	7600	.0324	.0060
18	7200	.0264	.0046
17	6800	.0218	.0045
16	6400	.0173	.0033
15	6000	.0140	.0026
14	5600	.0114	.0022
13	5200	.0092	.0018
12	4800	.0074	.0018
11	4400	.0056	.0016
10	4000	.0040	.0011
9	3600	.0029	.0010
8	3200	.0019	.0006
7	2800	.0013	.0005
6	2400	.0007	.0005
5	2000	.0002	.0001
4	1600	.0001	
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: X4 PF-19A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: F

AVERAGE WIDTH: 1.5015 1.5023 1.5014 1.5010 1.5012

AVERAGE THICKNESS: .3805 .3806 .3803 .3800 .3811 .3807

AREA: .5714 RCAL. 17925

BASILINE STRESS: 34 KSI CALC. 92%

MAX. LOAD: 19427 A.POT. 757

CYCLES AT TERMINATION/REMARKS

2 Lives/

STATIC LOAD A-14.20 K# WAS NOT MILLED 2 SIDES
B-14.80 K# WAS MILLED - 2 SIDES

ORIGIN LIES ON BOLT HOLE SURFACE

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-20A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90

AVERAGE WIDTH: 1.5015 1.5016 1.5004 1.5022 1.5025

AVERAGE THICKNESS: .3770 .3775 .3766 .3769 .3766 .3775

AREA: .5661 RCAL. 18982

BASILINE STRESS: _____ CALC. 99%

MAX. LOAD: 19247 A.POT. 7.10

CYCLES AT TERMINATION/REMARKS

2 Lives/

STATIC LOAD A-16.35 K#
B-16.99 K#

ORIGIN LIES ON BOLT HOLE SURFACE.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1125	.0121
39	15600	.1004	.0104
38	15200	.0902	.0080
37	14800	.0820	.0071
36	14400	.0749	.0063
35	14000	.0686	.0061
34	13600	.0623	.0061
33	13200	.0564	.0058
32	12800	.0506	.0040
31	12400	.0466	.0048
30	12000	.0419	.0046
29	11600	.0372	.0052
28	11200	.0320	.0049
27	10800	.0271	.0039
26	10400	.0232	.0037
25	10000	.0195	.0033
24	9600	.0162	.0023
23	9200	.0139	.0026
22	8800	.0113	.0020
21	8400	.0093	.0014
20	8000	.0079	.0015
19	7600	.0061	.0012
18	7200	.0040	.0008
17	6800	.0041	.0005
16	6400	.0035	.0006
15	6000	.0029	.0004
14	5600	.0025	.0005
13	5200	.0020	.0002
12	4800	.0018	.0002
11	4400	.0016	.0003
10	4000	.0013	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0299	.0047
39	15600	.0252	.0034
38	15200	.0218	.0041
37	14800	.0177	.0024
36	14400	.0153	.0020
35	14000	.0133	.0019
34	13600	.0114	.0014
33	13200	.0100	.0016
32	12800	.0084	.0012
31	12400	.0072	.0012
30	12000	.0060	.0010
29	11600	.0050	.0008
28	11200	.0042	.0008
27	10800	.0034	.0007
26	10400	.0027	.0005
25	10000	.0022	.0003
24	9600	.0019	.0003
23	9200	.0013	.0002
22	8800	.0014	.0002
21	8400	.0012	.0002
20	8000	.0010	.0002
19	7600	.0008	.0001
18	7200	.0007	.0001
17	6800	.0006	.0001
16	6400	.0005	.0001
15	6000	.0004	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-21A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90

AVERAGE WIDTH: 1.4087 1.4085 1.4084 1.4091 1.4089

AVERAGE THICKNESS: .3772 .3778 .3778 .3752 .3729 .3778

A RFA: 15653 RCAL: 10082

BASELINE STRESS: 34ksi CALS: 99%

MAX. LOAD: 19220 A.POT: 76%

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A-15.81 K#
B-16.72 K#

ORIGIN LIES AT BASE OF
SLIVER FROM BOLT HOLE
SURFACE

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-22A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: d

AVERAGE WIDTH: 1.5014 1.5020 1.5008 1.5015 1.5011

AVERAGE THICKNESS: .3808 .3788 .3787 .3789 .3773 .3793

A RFA: 15717 RCAL: 10470

BASELINE STRESS: 34ksi CALS: 95%

MAX. LOAD: 19438 A.POT: 77%

CYCLES AT FAILURE: *

2 Lives/ _____

1 @ 1,419,995 L.P.C. = 14835.13 Fi-HRS*

STATIC LOAD A- K#
B- K#

ORIGIN LIES ON BOLT HOLE SURFACE
FROM CIRC. DIFFERENTIAL TOOL MARK
(SLIVER)

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0760	.0066
39	15600	.0694	.0060
38	15200	.0634	.0056
37	14800	.0578	.0057
36	14400	.0521	.0049
35	14000	.0472	.0048
34	13600	.0423	.0042
33	13200	.0382	.0039
32	12800	.0343	.0035
31	12400	.0308	.0033
30	12000	.0275	.0034
29	11600	.0241	.0025
28	11200	.0216	.0025
27	10800	.0191	.0026
26	10400	.0165	.0018
25	10000	.0147	.0021
24	9600	.0126	.0016
23	9200	.0110	.0011
22	8800	.0099	.0012
21	8400	.0087	.0008
20	8000	.0079	.0010
19	7600	.0069	.0009
18	7200	.0060	.0008
17	6800	.0052	.0006
16	6400	.0046	.0007
15	6000	.0039	.0006
14	5600	.0033	.0005
13	5200	.0028	.0005
12	4800	.0023	.0003
11	4400	.0020	.0003
10	4000	.0017	.0003
9	3600	.0014	.0003
8	3200	.0011	.0002
7	2800	.0009	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200	.2948	.0670
37	14800	.2278	.0335
36	14400	.1943	.0278
35	14000	.1665	.0214
34	13600	.1451	.0178
33	13200	.1273	.0155
32	12800	.1118	.0136
31	12400	.0982	.0112
30	12000	.0870	.0119
29	11600	.0757	.0100
28	11200	.0651	.0076
27	10800	.0575	.0075
26	10400	.0500	.0059
25	10000	.0441	.0046
24	9600	.0375	.0038
23	9200	.0317	.0034
22	8800	.0263	.0044
21	8400	.0219	.0043
20	8000	.0176	.0026
19	7600	.0150	.0019
18	7200	.0131	.0015
17	6800	.0116	.0015
16	6400	.0101	.0017
15	6000	.0084	.0015
14	5600	.0069	.0012
13	5200	.0057	.0010
12	4800	.0047	.0008
11	4400	.0039	.0007
10	4000	.0032	.0004
9	3600	.0025	.0005
8	3200	.0023	.0004
7	2800	.0019	.0002
6	2400	.0017	.0003
5	2000	.0014	.0002
4	1600	.0012	.0003
3	1200	.0009	.0003
2	800	.0006	
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-23A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15

AVERAGE WIDTH: 1.4939 1.5010 1.5011 1.4991 1.4987

AVERAGE THICKNESS: .3772 .3785 .3765 .3787 .3756 .3765

A REA: .5658 RCAL: 18478

BASELINE STRESS: 34 ksi CALS: 96%

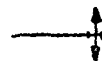
MAX. LOAD: 19235 A.POT: 7.70

CYCLES AT ~~FAILURE~~/FAILURE: *

2 Lives/_____

@ 1,493,815 L.R.s ~ 15,606.36 Flt-Hrs *

STATIC LOAD A- K#
B- K#



ORIGIN LIES ON BOLT
HOLE SURFACE.

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-24A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 16

AVERAGE WIDTH: 1.5003 1.5001 1.4990 1.5000 1.5010

AVERAGE THICKNESS: .3741 .3728 .3720 .3736 .3758 .3757

A REA: .5613 RCAL: 18652

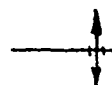
BASELINE STRESS: 34 ksi CALS: 98%

MAX. LOAD: 19083 A.POT: 7.63

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-15.27 K#
B-15.90 K#



ORIGIN LIES AT CORNER
WHICH HAD A RADIUS.

ORIGIN WAS AT THE BASE OF A SLIVER.

FRACTOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.3495	.1110
39	15600	.2385	.0453
38	15200	.1932	.0367
37	14800	.1565	.0293
36	14400	.1272	.0241
35	14000	.1031	.0201
34	13600	.0830	.0161
33	13200	.0669	.0124
32	12800	.0545	.0084
31	12400	.0461	.0058
30	12000	.0403	.0081
29	11600	.0322	.0070
28	11200	.0257	.0057
27	10800	.0201	.0050
26	10400	.0151	.0026
25	10000	.0125	.0025
24	9600	.0109	.0017
23	9200	.0083	.0011
22	8800	.0072	.0009
21	8400	.0063	.0008
20	8000	.0055	.0006
19	7600	.0049	.0007
18	7200	.0042	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1016	.0089
39	15600	.0927	.0085
38	15200	.0842	.0092
37	14800	.0750	.0063
36	14400	.0687	.0053
35	14000	.0630	.0046
34	13600	.0584	.0049
33	13200	.0535	.0053
32	12800	.0482	.0040
31	12400	.0442	.0043
30	12000	.0399	.0048
29	11600	.0351	.0037
28	11200	.0314	.0033
27	10800	.0281	.0026
26	10400	.0255	.0025
25	10000	.0230	.0022
24	9600	.0208	.0018
23	9200	.0190	.0016
22	8800	.0174	.0015
21	8400	.0159	.0015
20	8000	.0144	.0012
19	7600	.0132	.0012
18	7200	.0120	.0012
17	6800	.0108	.0011
16	6400	.0097	.0013
15	6000	.0084	.0009
14	5600	.0075	.0010
13	5200	.0065	.0009
12	4800	.0056	.0008
11	4400	.0048	.0007
10	4000	.0041	.0006
9	3600	.0035	.0005
8	3200	.0030	.0004
7	2800	.0026	.0004
6	2400	.0022	.0005
5	2000	.0017	.0004
4	1600	.0013	.0003
3	1200	.0010	.0001
2	800	.0009	
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-25A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15

AVERAGE WIDTH: 1.5008 1.5005 1.5002 1.5018 1.5002

AVERAGE THICKNESS: .3785 .3786 .3775 .3783 .3794 .3786

AREA: .5680 RCAL: 18V78

BASELINE STRESS: 34KSI CALS: 96%

MAX. LOAD: 19313 A.POT: 7.73

CYCLES AT TERMINATION/REMARKS:

2 Lives/_____

STATIC LOAD A-1542 K#
B-16.96 K#



ORIGIN LIES AT THE BASE OF A SLIVER
FROM BOLT HOLE SURFACE.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0690	.0055
39	15600	.0635	.0047
38	15200	.0588	.0048
37	14800	.0540	.0049
36	14400	.0491	.0043
35	14000	.0448	.0041
34	13600	.0407	.0036
33	13200	.0371	.0033
32	12800	.0338	.0037
31	12400	.0301	.0032
30	12000	.0269	.0026
29	11600	.0243	.0027
28	11200	.0216	.0023
27	10800	.0193	.0016
26	10400	.0177	.0017
25	10000	.0160	.0013
24	9600	.0147	.0015
23	9200	.0132	.0013
22	8800	.0119	.0011
21	8400	.0108	.0015
20	8000	.0093	.0013
19	7600	.0080	.0012
18	7200	.0070	.0009
17	6800	.0061	.0008
16	6400	.0053	.0007
15	6000	.0046	.0004
14	5600	.0042	.0005
13	5200	.0037	.0005
12	4800	.0032	.0002
11	4400	.0030	.0002
10	4000	.0028	.0005
9	3600	.0023	.0001
8	3200	.0022	.0003
7	2800	.0019	.0003
6	2400	.0016	.0003
5	2000	.0013	
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-26A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90 (3)

AVERAGE WIDTH: 1.5003 1.5001 1.4999 1.5004 1.5008

AVERAGE THICKNESS: .3738 .3730 .3729 .3728 .3754 .3748

AREA: .5008 RCAL: 18982

BASELINE STRESS: 34KSI CALS: 99%

MAX. LOAD: 19067 A.POT: 7.63

CYCLES AT TERMINATION/REMARKS:

2 Lives/_____

STATIC LOAD A-1400 K#
B-15.84 K#



ORIGIN LIES AT BASE
OF A SLIVER FROM BOLT HOLE
SURFACE.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1318	.0191
39	15600	.1127	.0157
38	15200	.0970	.0125
37	14800	.0845	.0127
36	14400	.0718	.0103
35	14000	.0615	.0099
34	13600	.0516	.0088
33	13200	.0428	.0077
32	12800	.0351	.0068
31	12400	.0283	.0060
30	12000	.0223	.0035
29	11600	.0188	.0027
28	11200	.0161	.0021
27	10800	.0140	.0020
26	10400	.0120	.0019
25	10000	.0101	.0013
24	9600	.0088	.0013
23	9200	.0075	.0009
22	8800	.0066	.0007
21	8400	.0059	.0006
20	8000	.0053	.0006
19	7600	.0047	.0007
18	7200	.0040	.0007
17	6800	.0033	.0004
16	6400	.0029	.0006
15	6000	.0023	.0003
14	5600	.0020	.0005
13	5200	.0015	.0004
12	4800	.0011	.0002
11	4400	.0009	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XUPF-27B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15 ④

AVERAGE WIDTH: 1.5037 1.5049 1.5045 1.5018 1.5036

AVERAGE THICKNESS: .3796 .3740 .3755 .3761 .3806 .3793

AREA: .5678 RCAL. 18478

BASLINE STRESS: 34KSC CALS. 96%

MAX. LOAD: 19306 A.POT. 712

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-1789 K#
B-15.60 K#

—•—•—•— MATING SURFACES WERE
MILLED. ORIGIN LIES ON
BOLT HOLE SURFACE

FATIGUE TEST DATA

SPECIMEN NUMBER: XUPF-28A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: F

AVERAGE WIDTH: 1.5014 1.5024 1.5014 1.5005 1.5011

AVERAGE THICKNESS: .3812 .3815 .3806 .3814 .3811 .3815

AREA: .5723 RCAL. 17925

BASLINE STRESS: 34KSC CALS. 92%

MAX. LOAD: 19459 A.POT. 778

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-10.86 K#
B-10.86 K#

—+—+—+— ORIGIN LIES ON BOLT HOLE SURFACE
FROM CIRCUMFERENTIAL TOOL MARK
CREATING A SLIVER. 135

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0838	.0019
39	15600	.0769	.0052
38	15200	.0717	.0042
37	14800	.0675	.0047
36	14400	.0628	.0044
35	14000	.0584	.0054
34	13600	.0530	.0050
33	13200	.0480	.0052
32	12800	.0428	.0047
31	12400	.0381	.0046
30	12000	.0336	.0048
29	11600	.0288	.0040
28	11200	.0243	.0038
27	10800	.0210	.0026
26	10400	.0184	.0020
25	10000	.0164	.0022
24	9600	.0142	.0019
23	9200	.0123	.0015
22	8800	.0108	.0015
21	8400	.0093	.0013
20	8000	.0080	.0012
19	7600	.0068	.0010
18	7200	.0058	.0010
17	6800	.0048	.0008
16	6400	.0040	.0007
15	6000	.0033	.0005
14	5600	.0028	.0006
13	5200	.0022	.0003
12	4800	.0019	.0004
11	4400	.0015	.0004
10	4000	.0011	.0003
9	3600	.0008	.0004
8	3200	.0004	.0002
7	2800	.0002	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.2433	.0344
39	15600	.2084	.0281
38	15200	.1808	.0258
37	14800	.1550	.0247
36	14400	.1303	.0199
35	14000	.1104	.0166
34	13600	.0938	.0181
33	13200	.0757	.0144
32	12800	.0613	.0135
31	12400	.0478	.0094
30	12000	.0384	.0078
29	11600	.0306	.0057
28	11200	.0249	.0036
27	10800	.0213	.0030
26	10400	.0183	.0031
25	10000	.0152	.0027
24	9600	.0125	.0024
23	9200	.0101	.0014
22	8800	.0087	.0013
21	8400	.0074	.0011
20	8000	.0063	.0009
19	7600	.0054	.0007
18	7200	.0047	.0007
17	6800	.0040	.0005
16	6400	.0035	.0004
15	6000	.0031	.0005
14	5600	.0026	.0004
13	5200	.0022	.0004
12	4800	.0018	.0003
11	4400	.0015	.0002
10	4000	.0013	.0003
9	3600	.0010	.0001
8	3200	.0009	.0002
7	2800	.0007	.0002
6	2400	.0005	.0002
5	2000	.0003	
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-29B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: e

AVERAGE WIDTH: 1.5018 1.5058 1.5053 1.5039 1.5043

AVERAGE THICKNESS: .3792 .3781 .3767 .3779 .3819 .3814

AREA: .5706 RCAL 18652

BASILENE STRESS: 84 KSC CALS 96%

MAX. LOAD: 19401 A.POT. 776

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ 1,531,494

STATIC LOAD A- 13.88 K#
B- 14.25 K#

ORIGIN LIES ON PLATE SURFACE
NEAR CORNER.

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-30A *

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 16 5

AVERAGE WIDTH: 1.5023 1.5028 1.5023 1.5018 1.5026

AVERAGE THICKNESS: .3787 .3771 .3764 .3773 .3829 .3819

AREA: .5690 RCAL 18652

BASILENE STRESS: 34 KSI CALS 96%

MAX. LOAD: 19545 A.POT. 774

CYCLES AT FAILURE: *

2 Lives/ _____

1 @ 1,373,537 P's = 14,349.77 FLT-HRS *

STATIC LOAD A- K#
B- K#

ORIGIN LIES ON BOLT
HOLE SURFACE

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	1.383	0.145
39	15600	1.238	0.105
38	15200	1.133	0.107
37	14800	1.026	0.083
36	14400	0.943	0.083
35	14000	0.863	0.070
34	13600	0.793	0.064
33	13200	0.729	0.059
32	12800	0.670	0.058
31	12400	0.612	0.056
30	12000	0.556	0.054
29	11600	0.502	0.042
28	11200	0.460	0.031
27	10800	0.429	0.029
26	10400	0.400	0.030
25	10000	0.370	0.025
24	9600	0.335	0.021
23	9200	0.314	0.019
22	8800	0.295	0.018
21	8400	0.277	0.025
20	8000	0.252	0.023
19	7600	0.229	0.023
18	7200	0.206	0.028
17	6800	0.178	0.030
16	6400	0.148	0.019
15	6000	0.129	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200		
37	14800		
36	14400	.2559	.0541
35	14000	.2018	.0374
34	13600	.1644	.0316
33	13200	.1328	.0284
32	12800	.1044	.0252
31	12400	.0792	.0216
30	12000	.0576	.0145
29	11600	.0431	.0101
28	11200	.0330	.0073
27	10800	.0257	.0046
26	10400	.0211	.0040
25	10000	.0171	.0026
24	9600	.0145	.0028
23	9200	.0117	.0013
22	8800	.0104	.0018
21	8400	.0086	.0016
20	8000	.0070	.0010
19	7600	.0060	.0008
18	7200	.0052	.0006
17	6800	.0046	.0009
16	6400	.0037	.0005
15	6000	.0032	.0006
14	5600	.0026	.0005
13	5200	.0021	.0003
12	4800	.0018	.0003
11	4400	.0015	.0003
10	4000	.0012	.0003
9	3600	.0009	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-31B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 17 (6)

AVERAGE WIDTH: 1.5025 1.5024 1.5028 1.5025 1.5022

AVERAGE THICKNESS: 1.37004 1.3802 1.3765 1.3799 1.3770 1.3766

A REA: .5680 RCAL: 17925

BASLINE STRESS: 34KSL CALS: 924%

MAX. LOAD: 19312 A.POT. 712

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A-16.00 K#
B-13.86 K#



ORIGIN LIES ON BOLT HOLE SURFACE.

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-33B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90

AVERAGE WIDTH: 1.4985 1.4977 1.4966 1.4998 1.5000

AVERAGE THICKNESS: 1.3970 1.3765 1.3766 1.3762 1.3772 1.3786

A REA: .5650 RCAL: 10148 ¹⁵⁰⁸²

BASLINE STRESS: 34KSL CALS: 96% ^{99%}

MAX. LOAD: 19209 A.POT. 770

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A-16.27 K#
B-14.46 K#



ORIGIN LIES AT CORNER WHICH HAD A RADIUS. ORIGIN ON OPPOSITE OF HOLE LIES ON MATING SURFACE FROM A TOOL MARK. DUE TO RELAXED TOLERANCE - MILLING. MATING SURFACES WERE MILLED.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1347	.0103
39	15600	.1244	.0084
38	15200	.1160	.0075
37	14800	.1085	.0077
36	14400	.1008	.0076
35	14000	.0932	.0063
34	13600	.0869	.0064
33	13200	.0805	.0057
32	12800	.0748	.0049
31	12400	.0699	.0046
30	12000	.0653	.0049
29	11600	.0604	.0046
28	11200	.0558	.0033
27	10800	.0525	.0040
26	10400	.0485	.0046
25	10000	.0439	.0039
24	9600	.0400	.0048
23	9200	.0352	.0036
22	8800	.0316	.0034
21	8400	.0282	.0034
20	8000	.0258	.0033
19	7600	.0225	.0020
18	7200	.0195	.0024
17	6800	.0171	.0027
16	6400	.0144	.0029
15	6000	.0115	.0018
14	5600	.0097	.0014
13	5200	.0083	.0013
12	4800	.0070	.0010
11	4400	.0060	.0009
10	4000	.0051	.0010
9	3600	.0041	.0008
8	3200	.0033	.0007
7	2800	.0026	.0006
6	2400	.0020	.0005
5	2000	.0015	
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0980	.0130
39	15600	.0850	.0081
38	15200	.0769	.0079
37	14800	.0690	.0065
36	14400	.0625	.0059
35	14000	.0566	.0065
34	13600	.0501	.0056
33	13200	.0445	.0053
32	12800	.0392	.0050
31	12400	.0342	.0047
30	12000	.0295	.0034
29	11600	.0261	.0038
28	11200	.0233	.0030
27	10800	.0203	.0023
26	10400	.0180	.0027
25	10000	.0153	.0017
24	9600	.0136	.0015
23	9200	.0121	.0013
22	8800	.0108	.0011
21	8400	.0097	.0010
20	8000	.0087	.0007
19	7600	.0080	.0009
18	7200	.0071	.0008
17	6800	.0063	.0008
16	6400	.0055	.0006
15	6000	.0049	.0006
14	5600	.0043	.0006
13	5200	.0037	.0004
12	4800	.0033	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-34B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15

AVERAGE WIDTH: 1.5000 1.5002 1.5006 1.5014 1.5009

AVERAGE THICKNESS: .3781 .3770 .3769 .3767 .3794 .3803

AREA: .5675 RCAL 7800 18478

BASILINE STRESS: 34 KSI CALS 98% 96%

MAX. LOAD: 10204 A.POT. 772

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-13.42 K#
B-12.14 K#

ORIGIN LIES AT THE BASE OF
A SLIVER FROM THE BOLT HOLE

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-35B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5007 1.5015 1.5008 1.5001 1.5002

AVERAGE THICKNESS: .3812 .3810 .3803 .3813 .3811 .3822

AREA: .5720 RCAL 18932

BASILINE STRESS: _____ CALS 98%

MAX. LOAD: 19448 A.POT. 778

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-16.24 K#
B-16.45 K#

ORIGIN LIES ON CHAMFERED CORNER.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.3030	.0234
39	15600	.2794	.0241
38	15200	.2553	.0198
37	14800	.2355	.0189
36	14400	.2166	.0176
35	14000	.1990	.0157
34	13600	.1833	.0154
33	13200	.1679	.0147
32	12800	.1532	.0137
31	12400	.1395	.0142
30	12000	.1253	.0135
29	11600	.1118	.0238
28	11200	.0880	.0127
27	10800	.0753	.0098
26	10400	.0655	.0102
25	10000	.0553	.0080
24	9600	.0473	.0068
23	9200	.0405	.0067
22	8800	.0338	.0056
21	8400	.0282	.0057
20	8000	.0225	.0043
19	7600	.0182	.0029
18	7200	.0153	.0023
17	6800	.0130	.0019
16	6400	.0111	.0016
15	6000	.0095	.0020
14	5600	.0075	.0013
13	5200	.0062	.0010
12	4800	.0052	.0008
11	4400	.0044	.0006
10	4000	.0038	.0007
9	3600	.0031	.0005
8	3200	.0026	.0004
7	2800	.0022	.0005
6	2400	.0017	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0817	.0103
39	15600	.0714	.0080
38	15200	.0634	.0056
37	14800	.0578	.0058
36	14400	.0520	.0060
35	14000	.0460	.0057
34	13600	.0403	.0051
33	13200	.0352	.0037
32	12800	.0315	.0034
31	12400	.0281	.0031
30	12000	.0250	.0032
29	11600	.0218	.0030
28	11200	.0188	.0019
27	10800	.0169	.0018
26	10400	.0151	.0019
25	10000	.0132	.0019
24	9600	.0113	.0019
23	9200	.0094	.0016
22	8800	.0078	.0009
21	8400	.0069	.0009
20	8000	.0060	.0007
19	7600	.0053	.0008
18	7200	.0045	.0005
17	6800	.0040	.0007
16	6400	.0033	.0004
15	6000	.0029	.0006
14	5600	.0023	.0003
13	5200	.0020	.0003
12	4800	.0017	.0003
11	4400	.0014	.0001
10	4000	.0013	.0001
9	3600	.0012	.0002
8	3200	.0010	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-36A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: d Ⓟ

AVERAGE WIDTH: 1.5008 1.4997 1.5011 1.5007 1.5015

AVERAGE THICKNESS: .3779 .3764 .3755 .3768 .3805 .3822

AREA: .5671 RCAL. 18478

BASELINE STRESS: 34 ksi CALS. 96%

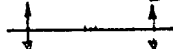
MAX. LOAD: 19282 A.POT. 771

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/_____

@ 1,493,815 L.P.S. = 15,606.36 FLT-HRS *

STATIC LOAD A- K#
B- K#



FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-37B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5021 1.5021 1.5021 1.5019 1.5021

AVERAGE THICKNESS: .3791 .3794 .3787 .3797 .3788 .3790

AREA: .5695 RCAL. 18982

BASELINE STRESS: 34 ksi CALS. 98%

MAX. LOAD: 19362 A.POT. 714

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/_____

STATIC LOAD A- 14.00 K#
B- 12.60 K#



ORIGIN LIES ON BOLT HOLE SURFACE
AT TRANSITION OF BOLT HOLE AND
RADIUS OF CORNER. 139

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.3411	.0028
39	15600	.3383	.0093
38	15200	.2690	.0357
37	14800	.2533	.0245
36	14400	.2088	.0208
35	14000	.1880	.0196
34	13600	.1684	.0197
33	13200	.1487	.0153
32	12800	.1334	.0116
31	12400	.1218	.0117
30	12000	.1101	.0115
29	11600	.0986	.0095
28	11200	.0891	.0077
27	10800	.0814	.0063
26	10400	.0751	.0051
25	10000	.0700	.0058
24	9600	.0642	.0052
23	9200	.0590	.0049
22	8800	.0541	.0040
21	8400	.0501	.0037
20	8000	.0464	.0036
19	7600	.0428	.0036
18	7200	.0392	.0039
17	6800	.0355	.0035
16	6400	.0318	.0025
15	6000	.0293	.0030
14	5600	.0263	.0033
13	5200	.0230	.0035
12	4800	.0195	.0032
11	4400	.0163	.0032
10	4000	.0141	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1138	.0167
39	15600	.0971	.0117
38	15200	.0854	.0106
37	14800	.0748	.0098
36	14400	.0650	.0077
35	14000	.0573	.0096
34	13600	.0497	.0065
33	13200	.0432	.0053
32	12800	.0379	.0043
31	12400	.0336	.0027
30	12000	.0309	.0039
29	11600	.0270	.0030
28	11200	.0240	.0025
27	10800	.0215	.0021
26	10400	.0194	.0021
25	10000	.0173	.0021
24	9600	.0152	.0021
23	9200	.0131	.0019
22	8800	.0112	.0020
21	8400	.0092	.0017
20	8000	.0075	.0015
19	7600	.0060	.0012
18	7200	.0048	.0010
17	6800	.0038	.0008
16	6400	.0030	.0005
15	6000	.0025	.0004
14	5600	.0021	.0003
13	5200	.0018	.0004
12	4800	.0014	.0003
11	4400	.0011	.0002
10	4000	.0009	.0003
9	3600	.0006	.0002
8	3200	.0004	.0002
7	2800	.0002	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FATIGUE TEST DATA

SPECIMEN NUMBER: XWPF-38B

SPECTRUM: fighter

TEST DATE: _____

TEST FRAME: D

AVERAGE WIDTH: 1.4099 1.5000 1.4999 1.5000 1.4993

AVERAGE THICKNESS: .3844 .3855 .3835 .3866 .3832 .3834

AREA: 5766 RCAL: 18478

BASILINE STRESS: 37ksi CAL.S. 94%

MAX. LOAD: 19603 A.POT. 784

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-10.68 K#
B-10.68 K#



ORIGIN LIE ON BOLT HOLE SURFACE
NEAR CORNER STARTING FROM
CIRCUMFERENTIAL TOOL MARK (SLIVER)

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.2953	0266
39	15600	2687	0268
38	15200	2419	0213
37	14800	2206	0200
36	14400	2006	0159
35	14000	1847	0170
34	13600	1677	0188
33	13200	1489	0106
32	12800	1383	0109
31	12400	1274	0102
30	12000	1171	0074
29	11600	1073	0077
28	11200	0999	0067
27	10800	0922	0055
26	10400	0855	0064
25	10000	0800	0052
24	9600	0736	0054
23	9200	0674	0052
22	8800	0622	0055
21	8400	0568	0055
20	8000	0513	0040
19	7600	0458	0048
18	7200	0418	0044
17	6800	0370	0040
16	6400	0326	0044
15	6000	0286	0030
14	5600	0242	0036
13	5200	0212	0028
12	4800	0176	0023
11	4400	0148	0030
10	4000	0125	0028
9	3600	0095	0020
8	3200	0067	0015
7	2800	0047	0011
6	2400	0032	0009
5	2000	0021	0005
4	1600	0012	0004
3	1200	0007	
2	800	0003	
1	400		

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

2.2.2 JWPB

FATIGUE TEST DATA

FRACTOGRAPHIC DATA

SPECIMEN NUMBER: XWPB-1B
SPECTRUM: Bomber
TEST DATE: AB CDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4971 | 1.4967 | 1.4972 | 1.4974 | 1.4973
AVERAGE THICKNESS: 3782 | 3801 | 3767 | 3804 | 3768 | 3769
AREA: .5662 R-Cal 8100
BASELINE STRESS: 33ksi Cal S 43.4
MAX. LOAD: 18684.6 Apt. 7.47
CYCLES AT TERMINATION/FAILURE: 2 Lives/
①
Static Load A-13.88 kN
B-12.10 kN

origin lies at corner. Both
Plate surfaces (A & B) were milled

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3680	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2550	0.126
	2480	0.153
	2380	0.194
	2280	0.200
	2180	0.248
	2080	0.238
	1980	0.227
	1880	0.242
	1780	0.260
	1680	0.222
	1580	0.181
	1480	0.144
	1380	0.118
One Life	1280	0.093
	1200	0.080
	1100	0.065
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Origin Damaged by
Rubbing on itself

SPECIMEN NUMBER: XWPB-2B
SPECTRUM: Bomber
TEST DATE: AB CDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5020 | 1.5021 | 1.5023 | 1.5004 | 1.4988
AVERAGE THICKNESS: 3830 | 3827 | 3813 | 3825 | 3843 | 3812
AREA: .5748 R-Cal 10982 (0.100)
BASELINE STRESS: 33ksi Cal S 43.6
MAX. LOAD: 18960 Apt. 7.59
CYCLES AT TERMINATION/FAILURE: 2 Lives/
①
Static Load A-15.28 kN
B-13.30 kN

origin lies on Bolt Hole Surface.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3680	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	0.173
	2480	0.153
	2380	0.102
	2280	0.176
	2180	0.202
	2080	0.260
	1980	0.264
	1880	0.290
	1780	0.221
	1680	0.171
	1580	0.140
	1480	0.103
	1380	0.085
One Life	1280	0.067
	1200	0.055
	1100	0.047
	1000	0.041
	900	0.031
	800	0.025
	700	0.019
	600	
	500	
	400	
	300	
	200	

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GENERAL DYNAMICS
Part No. 10-10-10
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-3A
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5029 1.5024 1.5023 1.5033 1.5034
AVERAGE THICKNESS: 3897 3802 3774 3794 3833 3831
AREA: .5721 R-Cal 18478 (2894)
BASELINE STRESS: 33ksi Cal.S 42% *
MAX. LOAD: 18879 Apt 7.56
CYCLES AT FAILURE / FAILURE: * 31ives/
@ 649,487 L.P.C. = 2518.92 FLTG *
STATIC LOAD A- K#
B- K#

Origin lies on Bolt Hole Surface

SPECIMEN NUMBER: XWPB-4A
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4999 1.4992 1.4992 1.5003 1.5006
AVERAGE THICKNESS: 3820 3812 3816 3810 3809
AREA: .5722 R-Cal 18652 (7857)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 18880 Apt 7.55
CYCLES AT FAILURE / FAILURE: * 31ives/
@ 394,607 L.P.C. = 1518.73 FLTG *
STATIC LOAD A- K#
B- K#

Origin lies on transition point
of Bolt Hole and corner (rounded).
Both Plate Surfaces (A & B) were
milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2560	
	2480	.5940
	2380	.2552
	2280	.1714
	2180	.1199
	2080	.0810
	1980	.0531
	1880	.0347
	1780	.0249
	1680	.0176
	1580	.0132
	1480	.0102
	1380	.0081
	1280	.0063
	1180	.0059
	1080	.0054
	980	.0053
	880	.0053
	780	.0053
	680	.0053
	580	.0053
	480	.0053
	380	.0053
	280	.0053
	180	.0053
	80	.0053
	0	.0053

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	.6280
	1480	.3101
	1380	.1982
	1280	.1337
	1180	.1001
	1080	.0700
	980	.0398
	880	.0332
	780	.0231
	680	.0148
	580	.0091
	480	.0049
	380	.0036
	280	.0023
	180	.0023
	80	.0023
	0	.0023

GENERAL DYNAMICS
Fort Worth Division
TALIMINATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-5B
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.502 | 1.5014 | 1.5026 | 1.5031 | 1.5015
AVERAGE THICKNESS: 3850 | 3850 | 3823 | 3841 | 3845 | 3794
AREA: .5783 R-Cal 7894
BASELINE STRESS: 33ksi Cal S 41.4
MAX. LOAD: 19083.9 Act 763 *
CYCLES AT ~~FAILURE~~ / FAILURE: * 2 Slives/
③ 639145 L.P.s = 2478.81 FLTS *
STATIC LOAD A- K#
B- K#

Origin lies at corner.

SPECIMEN NUMBER: XWPB-6A
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4993 | 1.4995 | 1.5003 | 1.5000 | 1.4985
AVERAGE THICKNESS: 3843 | 3817 | 3844 | 3844 | 3837 | 3842
AREA: .5764 R-Cal 17925 (7668)
BASELINE STRESS: 33ksi Cal S 40%
MAX. LOAD: 17020 Act 761
CYCLES AT ~~FAILURE~~ / FAILURE: * ~~FAILURE~~ /
③ 535,993 L.P.s = 2078.76 FLTS *
STATIC LOAD A- K#
B- K#

Origin lies at X-axis between
Bolt hole surface and corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
Two Lives	2660	
	2560	
	2480	.5227
	2380	2182
	2280	1593
	2180	1161
	2080	0869
	1980	0658
	1880	0501
	1780	0394
	1680	0323
	1580	0265
	1480	0212
	1380	0167
One Life	1280	0133
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Fracture damaged
by rubbing on itself

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
* →	2080	.4350
	1980	2349
	1880	1804
	1780	1315
	1680	0975
	1580	0731
	1480	0521
	1380	0382
One Life	1280	0302
	1200	0231
	1100	0157
	1000	0108
	900	0072
	800	0044
	700	0026
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-7A
SPECTRUM: Bomber
TEST DATE: DA-24
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5016 | 1.5013 | 1.5013 | 1.5020 | 1.5020
AVERAGE THICKNESS: 3832 | 3852 | 3825 | 3844 | 3820 | 3817
AREA: 5754 R-CA 7957
BASELINE STRESS: 33 ksci Cal S 41.9
MAX. LOAD: 18988.2 Apt 7.60 *
CYCLES AT TERMINATION/FAILURE: 2 3110s/
3 597,964 L.P. - 2319.1 FLTS*
Failure Load A KII
B KII

Origin lies at corner.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three-Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two-Lives	2560	
	2480	
	2400	5032
	2280	3959
	2180	3015
	2080	2430
	1980	1937
	1880	1524
	1780	1211
	1680	0932
	1580	0716
	1480	0532
	1380	0420
One-Life	1280	0327
	1200	0271
	1100	0213
	1000	0164
	900	0123
	800	0087
	700	0065
	600	
	500	
	400	
	300	
	200	

SPECIMEN NUMBER: XWPB-8B
SPECTRUM: Bomber
TEST DATE: DA-25
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5017 | 1.5016 | 1.5017 | 1.5016 | 1.5020
AVERAGE THICKNESS: 3837 | 3857 | 3827 | 3847 | 3827 | 3827
AREA: 5762 R-CA 7668
BASELINE STRESS: 33 ksci Cal S 40.3
MAX. LOAD: 19014.6 Apt 7.61
CYCLES AT ~~TERMINATION~~/FAILURE: 2 3110s/
3 378,738 L.P.s 1468.87 FLTS*
Failure Load A KII
B KII

Origin lies at corner.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three-Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two-Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	3351
	1380	2432
One-Life	1280	1525
	1200	1171
	1100	0799
	1000	0565
	900	0384
	800	0272
	700	0190
	600	0133
	500	0087
	400	0055
	300	0035
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-9A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5010 1.5013 1.5016 1.5010 1.5004
AVERAGE THICKNESS: 387 3874 3865 3870 3873 3874
AREA: .5810 R.C. 8100
BASELINE STRESS: 33KSC C.S. 42.2 *
MAX. LOAD: 19173.0 Apt. 767
CYCLES AT FAILURE * 2520 2530 FLTS
(*) 2520 2530 FLTS

Completed 2 lives but failed plate "A"
Before the end of 2 lives.
Origin lies on Bolt Hole surface
near corner.

SPECIMEN NUMBER: XWPB-10A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.4995 1.4978 1.4988 1.5012 1.5004
AVERAGE THICKNESS: 3814 3828 3833 3840 3810 3810
AREA: .5719 R.C. 7894
BASELINE STRESS: 33KSC C.S. 41.8
MAX. LOAD: 18872.7 Apt. 755
CYCLES AT FAILURE * 2 9 Lives/
(*) 458,628 L.P.S. = 1778.71 FLTS *

Origins lies at corner.

FRAC TOGRAPHIC DATA

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2480	
	2367	
	2273	
	2181	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TENSILE TEST SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-11A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5039 1.5034 1.5041 1.5050 1.5033
AVERAGE THICKNESS: 3.785 3.818 3.799 3.713 3.794 3.804
AREA: 5.692 R.C. 7668
CAL S 40.8
BASELINE STRESS: 33 Ksc Apt 7.51
MAX. LOAD: 18783.6
CYCLES AT FAILURE: 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
① 458,628 L.P.S. = 1778.71 FLTS
Failure Load A- K/H
B- H/H

origin lies on Bolt Hole surface.

FLTS.	C.H.	Ca
100	0007	0007

SPECIMEN NUMBER: XWPB-12A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5010 1.4994 1.5016 1.5017 1.5013
AVERAGE THICKNESS: 3.835 3.849 3.823 3.838 3.835 3.814
AREA: 5.756 R.C. 7957
CAL S 41.9
BASELINE STRESS: 33 Ksc Apt 7.60
MAX. LOAD: 18994.8
CYCLES AT FAILURE: 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
① 512,974 L.P.S. - 2008.87 FLTS
Failure Load A- K/H
B- H/H

origin lies at corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	4535
	1680	2478
	1580	1673
	1480	1139
	1380	0768
One Life	1280	0525
	1200	0386
	1100	0281
	1000	0203
	900	0144
	800	0103
	700	0077
	600	0058
	500	0045
	400	0032
	300	0021
	200	0011
		2057
		0805
		0534
		0371
		0245
		0139
		0105
		0078
		0059
		0041
		0026
		0019
		0013
		0013
		0011
		0010
		0004
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	4475
	1980	3420
	1880	2309
	1780	1704
	1680	1226
	1580	0892
	1480	0668
	1380	0485
One Life	1280	0361
	1200	0298
	1100	0236
	1000	0176
	900	0137
	800	0094
	700	0067
	600	0047
	500	0035
	400	0022
	300	
	200	
		1117
		0805
		0478
		0328
		0230
		0183
		0129
		0063
		0062
		0060
		0039
		0043
		0027
		0019
		0013
		0013

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GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-13B

SPECTRUM: Pomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WID R: 1.5003 1.5009 1.5008 1.5002 1.4998

AVERAGE THICKNESS: .3784 .3793 .3792 .3788 .3772

AREA: .5677 R-Cal 8982 (8100)

BASILINE STRESS: 33Ksi Cal.S 43%

MAX. LOAD: 18735 Appt 749

CYCLES AT TERMINATION/FAILURE: 2 Lives/

②
STATIC LOAD A- 14.60 K#
B- 14.30 K#

origin lies on Bolt Hole surface
near corner.

SPECIMEN NUMBER: XWPB-15A

SPECTRUM: Pomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.4995 1.4986 1.4985 1.5006 1.5003

AVERAGE THICKNESS: .3791 .3820 .3782 .3809 .3773

AREA: .5684 R-Cal 18602 (7057)

BASILINE STRESS: 33Ksi Cal.S 42%

MAX. LOAD: 18757.2# Appt 750

CYCLES AT ~~TERMINATION~~/FAILURE: 2 Lives/

② 613357 L.P.s = 2378.8 FLTS *

STATIC LOAD A- K#
B- K#

origin lies at corner & both
Plate Surfaces (A & B) were welded

(143)
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FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1423
	2480	.1194
	2380	.0970
	2280	.0784
	2180	.0647
	2080	.0529
	1980	.0433
	1880	.0368
	1780	.0321
	1680	.0272
	1580	.0223
	1480	.0189
	1380	.0149
One Life	1280	.0121
	1200	.0105
	1100	.0081
	1000	.0055
	900	.0040
	800	.0030
	700	.0022
	600	.0015
	500	.0010
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
* ->	2480	.3553
	2280	.2415
	2180	.1760
	2080	.1323
	1980	.0970
	1880	.0708
	1780	.0506
	1680	.0351
	1580	.0263
	1480	.0184
	1380	.0133
One Life	1280	.0093
	1200	.0070
	1100	.0048
	1000	.0034
	900	.0024
	800	.0015
	700	.0010
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-16A
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5008 | 1.5006 | 1.5015 | 1.5007 | 1.5005
AVERAGE THICKNESS: 3772 | 3793 | 3753 | 3800 | 3754 | 3760
AREA: .5661 R-Cal 17925 (7660)
BASELINE STRESS: 33 KSI Cal.S 41%
MAX. LOAD: 18681.3 Apt. 241
CYCLES AT ~~FAILURE~~/FAILURE: * 2 Lives/
@ 404,526 L.P.s = 1568.89 FLTS*
STATIC LOAD A- K#
B- K#

origin lies at corner. Both
Plate surfaces (A+B) were
milled

FLTS	C.L.	Aa
100	0039	0059

SPECIMEN NUMBER: XWPB-21A
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5020 | 1.5022 | 1.5025 | 1.5027 | 1.5007
AVERAGE THICKNESS: 3731 | 3753 | 3705 | 3757 | 3722 | 3717
AREA: .5603 R-Cal 18982 (8109)
BASELINE STRESS: 33 KSI Cal.S 44%
MAX. LOAD: 18489.9 Apt. 240
CYCLES AT ~~FAILURE~~/FAILURE: * 2 Lives/
@ 584,506 L.P.s = 2266.91 *
STATIC LOAD A- K#
B- K#

origin lies on Both Hole Surface
Both plate surfaces (A+B) were milled.

FLTS	C.L.	A
100	0004	0004

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FRAC TOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
* →	.4722	.1460
	1480	.3262
	1380	.2481
One Life	1280	.1966
	1200	.1584
	1100	.1249
	1000	.0963
	900	.0757
	800	.0597
	700	.0441
	600	.0340
	500	.0253
	400	.0191
	300	.0133
	200	.0098

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
* →	.5797	.2366
	2180	.3431
	2080	.2766
	1980	.2364
	1880	.1898
	1780	.1598
	1680	.1335
	1580	.1105
	1480	.0925
	1380	.0738
One Life	1280	.0584
	1200	.0471
	1100	.0349
	1000	.0253
	900	.0185
	800	.0138
	700	.0106
	600	.0081
	500	.0058
	400	.0041
	300	.0027
	200	.0016

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GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-22A
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4996 | 1.4987 | 1.4995 | 1.5006 | 1.4998
AVERAGE THICKNESS: 3802 | 3825 | 3772 | 3825 | 3797 | 3794
AREA: .5701 R-Cal 18478 (2004)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 18813.3* Apt 7.53
CYCLES AT FAILURE * 2 Lives/
@ 503,624 L.P.S. = 1968.73 FLTS.*
STATIC LOAD A- K#
B- K#

origin lies at corner. Both Plate
surfaces (A & B) were milled.

SPECIMEN NUMBER: XWPB-23A
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4994 | 1.5008 | 1.4999 | 1.4985 | 1.4983
AVERAGE THICKNESS: 3802 | 3802 | 3805 | 3806 | 3801 | 3803
AREA: .5703 R-Cal 18982 (2000)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 18819 Apt 7.53
CYCLES AT FAILURE * 9 Lives/
@ 559,254 L.P.S. = 2168.17 FLTS.*
STATIC LOAD A- K#
B- K#

origin lies at corner. Both Plate
surfaces (A & B) were milled

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2490	
	2380	
	2280	
	2180	
	2080	
* →	5017	.2263
	1880	.0753
	1780	.0497
	1680	.0357
	1580	.0262
	1480	.0229
	1380	.0183
One Life	1280	.0109
	1200	.0095
	1100	.0070
	1000	.0059
	900	.0044
	800	.0033
	700	.0018
	600	.0019
	500	.0011
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
* →	5207	.1793
	2080	.0729
	1980	.0497
	1880	.0349
	1780	.0298
	1680	.0238
	1580	.0214
	1480	.0195
	1380	.0144
One Life	1280	.0139
	1200	.0114
	1100	.0093
	1000	.0081
	900	.0078
	800	.0061
	700	.0048
	600	.0030
	500	.0024
	400	
	300	
	200	

145
149

GENERAL DYNAMICS
Aircraft Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-24B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5008 1.5014 1.5009 1.5001 1.5003
AVERAGE THICKNESS: 3779 3768 3763 3783 3781 3778
AREA: .5671 R-Cal 18478 (7894)
Cal.S 42%
BASELINE STRESS: 33ksi Act 749
MAX. LOAD: 18713
CYCLES AT TERMINATION/FAILURE: 2 Lives /

①
STATIC LOAD A-15.28 K#
B-13.00 K#

origin lies on Bolt Hole surface near
corner. Both plate surfaces A & B were
milled.

FLTS	Ch.
100	0004

SPECIMEN NUMBER: XWPB-25B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5010 1.5009 1.5006 1.5011 1.5012
AVERAGE THICKNESS: 3890 3818 3831 3848 3947 3853
AREA: .5763 R-Cal 18652 (7957)
Cal.S 42%
BASELINE STRESS: 33ksi Act 761
MAX. LOAD: 19017
CYCLES AT TERMINATION/FAILURE: 2 Lives /

①
STATIC LOAD A-13.06 K#
B-12.80 K#

origin lies on Bolt Hole Surface.
Both plate surfaces A & B were milled.

146
150

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3150	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1551
	2480	.1269
	2380	.1017
	2280	.0795
	2180	.0640
	2080	.0538
	1980	.0432
	1880	.0353
	1760	.0293
	1680	.0252
	1580	.0198
	1480	.0154
	1380	.0107
One Life	1280	.0077
	1200	.0059
	1100	.0048
	1000	.0038
	900	.0029
	800	.0022
	700	.0018
	600	.0013
	500	.0010
	400	.0008
	300	.0007
	200	.0004

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.2508
	2480	.2158
	2380	.1759
	2280	.1443
	2180	.1154
	2080	.0867
	1980	.0662
	1880	.0478
	1780	.0333
	1680	.0249
	1580	.0183
	1480	.0138
	1380	.0098
One Life	1280	.0078
	1200	.0063
	1100	.0054
	1000	.0043
	900	.0032
	800	.0025
	700	.0020
	600	.0017
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-26B
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5021 1.4986 1.5028 1.5034 1.5036
AVERAGE THICKNESS: .3841 .3837 .3842 .3850 .3845 .3846
AREA: .5774 R-Cal 19025 (7660)
BASELINE STRESS: 33K Cal.S 40% * 7.62
MAX. LOAD: 19054
CYCLES AT TERMINATION/FAILURE: * 2 Lives/
@ 659,779 L.P.'s = 2558.84 Flts*
STATIC LOAD A- K#
B- K#

Origin lies on Bolt Hole Surface at base of shiver.

SPECIMEN NUMBER: XWPB-27B
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5005 1.5000 1.5002 1.5009 1.5008
AVERAGE THICKNESS: .3791 .3769 .3771 .3771 .3771 .3824
AREA: .5688 R-Cal 18478 (7894)
BASELINE STRESS: 33Kpsi Cal.S 42% * 7.51
MAX. LOAD: .8769
CYCLES AT TERMINATION/FAILURE: 2 Lives/
@
STATIC LOAD A-15.20 K#
B-8.84 K#

Origin lies at corner

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2560	
	2480	.4358
	2380	.3000
	2280	.2180
	2180	.1642
	2080	.1206
	1980	.0866
	1880	.0631
	1780	.0450
	1680	.0384
	1580	.0247
	1480	.0173
	1380	.0123
	1280	.0090
One Life	1200	.0068
	1100	.0055
	1000	.0042
	900	.0034
	800	.0027
	700	.0020
	600	.0015
	500	.0009
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2560	.3325
	2480	.2519
	2380	.1882
	2280	.1383
	2180	.1038
	2080	.0825
	1980	.0655
	1880	.0546
	1780	.0448
	1680	.0361
	1580	.0301
	1480	.0252
	1380	.0202
One Life	1280	.0182
	1200	.0155
	1100	.0132
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Origin Damaged by
Pulling on itself

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XUPB-28B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5017 1.5015 1.5010 1.5018 1.5024

AVERAGE THICKNESS: .3811 .3813 .3793 .3816 .3813 .3821

AREA: .5723 R-Cal 18652 (795)

BASILINE STRESS: 33 ksi Cal.S 42%

MAX. LOAD: 10,007 Apt. 7.55

CYCLES AT TERMINATION/FAILURE: 3 Lives/

@

STATIC LOAD A-17.00 K#

B-16.24 K#

origin lies at corner.

SPECIMEN NUMBER: XUPB-29A

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5002 1.5004 1.5005 1.4999 1.4999

AVERAGE THICKNESS: .3859 .3843 .3841 .3846 .3846 .3874

AREA: .5702 R-Cal 17925 (7660)

BASILINE STRESS: 33 ksi Cal.S 40%

MAX. LOAD: 19,079 Apt. 7.63

CYCLES AT TERMINATION/FAILURE: 2 Lives/

@

STATIC LOAD A-12.74 K#

B-13.66 K#

origin lies on Bolt Hole surface

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0708
	2480	.0632
	2380	.0549
	2280	.0471
	2180	.0416
	2080	.0372
	1980	.0330
	1880	.0299
	1780	.0264
	1680	.0238
	1580	.0193
	1480	.0160
	1380	.0130
One Life	1280	.0116
	1200	.0100
	1100	.0089
	1000	.0075
	900	.0068
	800	.0058
	700	.0051
	600	.0045
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.2520
	2480	.2132
	2380	.1744
	2280	.1229
	2180	.1157
	2080	.0924
	1980	.0739
	1880	.0566
	1780	.0426
	1680	.0325
	1580	.0239
	1480	.0161
	1380	.0118
One Life	1280	.0095
	1200	.0079
	1100	.0065
	1000	.0054
	900	.0046
	800	.0039
	700	.0035
	600	.0030
	500	.0029
	400	.0020
	300	.0016
	200	.0010

R _{ts}	CL.	Δ
100	.0006	.0004

GENERAL DYNAMICS
Fast Work Division
TALLIATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-30B

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5000 | 1.4990 | 1.4996 | 1.5010 | 1.5005

AVERAGE THICKNESS: 3827 | 3806 | 3817 | 3813 | 3844 | 3853

AREA: .5739 R-Cal 8100 / 18982

BASELINE STRESS: 33Ksc Cal S 42.82

MAX. LOAD: 18938.7 # Apt. 7.58

CYCLES AT FAILURE: * 2 Lives /

① 623699 L.P.C. = 2418.91 * FLTs

Struc. Load A- KII

B- KII

Origin lies on Bolt Hole surface
near corner. Both plate surfaces
(A & B) were milled.

SPECIMEN NUMBER: XWPB-31B

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5013 | 1.5022 | 1.5027 | 1.5013 | 1.4993

AVERAGE THICKNESS: 3821 | 3822 | 3783 | 3824 | 3839 | 3840

AREA: .5736 R-Cal 7894 / 18478

BASELINE STRESS: 33Ksc Cal S 41.7

MAX. LOAD: 18928.8 Apt. 7.57

CYCLES AT FAILURE: * 2 Lives /

① 603111 L.P.C. = 2339.06 FLTs *

Struc. Load A- KII

B- KII

origin lies at corner. Both plate
surface were milled (A & B)

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FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2380	.4589
	2280	.3545
	2180	.2587
	2080	.2032
	1980	.1626
	1880	.1331
	1780	.1060
	1680	.0849
	1580	.0702
	1480	.0575
	1380	.0470
	1280	.0378
One Life	1180	.0302
	1100	.0248
	1000	.0201
	900	.0159
	800	.0119
	700	
	600	
	500	
	400	
	300	
	200	

Origin damaged by
Rubbing on shaft

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2280	.4402
	2180	.3428
	2080	.2490
	1980	.1912
	1880	.1471
	1780	.1099
	1680	.0868
	1580	.0669
	1480	.0520
	1380	.0418
	1280	.0336
One Life	1180	.0266
	1100	.0217
	1000	.0173
	900	.0147
	800	.0107
	700	.0080
	600	.0062
	500	.0053
	400	.0045
	300	.0035
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XWPB-32B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5006 | 1.5018 | 1.5010 | 1.5004 | 1.4994
AVERAGE THICKNESS: 3805 | 3795 | 3774 | 3793 | 3835 | 3830
AREA: .5709 R-Cal 7957/18652
BASELINE STRESS: 33ksi Cal S 42.2
MAX. LOAD: 18839.7 Apt 7.54
CYCLES AT TERMINATION/FAILURE: 2 1/2 Lives

①
Tensile Load A-13.46 kN
B-13.98 kN

Origin lies on Bolt Hole surface
at corner. Both plate surfaces
were milled.

SPECIMEN NUMBER: XWPB-33B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5014 | 1.5010 | 1.5006 | 1.5019 | 1.5021
AVERAGE THICKNESS: 3802 | 3816 | 3792 | 3816 | 3795 | 3794
AREA: .5708 R-Cal 7668/17925
BASELINE STRESS: 33ksi Cal S 40.7
MAX. LOAD: 18836.4 Apt 7.53
CYCLES AT TERMINATION/FAILURE: 2 1/2 Lives

①
Tensile Load A-15.70 kN
B-13.84 kN

Origin lies at corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3150	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1887
	2480	.1594
	2380	.1272
	2280	.1017
	2180	.0812
	2080	.0660
	1980	.0548
	1880	.0422
	1780	.0345
	1680	.0285
	1580	.0227
	1480	.0184
	1380	.0149
One Life	1280	.0115
	1100	.0088
	1000	.0054
	900	.0044
	800	.0037
	700	.0026
	600	.0018
	500	.0013
	400	.0007
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1594
	2480	.1324
	2380	.1059
	2280	.0847
	2180	.0664
	2080	.0524
	1980	.0403
	1880	.0340
	1780	.0287
	1680	.0247
	1580	.0197
	1480	.0168
	1380	.0140
One Life	1280	.0112
	1200	.0094
	1100	.0075
	1000	.0056
	900	.0040
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Origin Damage by
Rubbing on floor

GENERAL DYNAMICS
Fort Worth Division
TAUJATION SHEET

FATIGUE TEST DATA

FRACTOGRAPHIC DATA

SPECIMEN NUMBER: XWPB-34B
SPECTRUM: Bomber
TEST DATE: A B C D E
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.5014 1.5013 1.5011 1.5009 1.5014
AVERAGE THICKNESS: 3.822 3.815 3.811 3.805 3.803 3.806
AREA: 5738 R-Qd 16652 (795)
BASELINE STRESS: 31ksi C/S 45%
MAX. LOAD: 17700 Apt 712
CYCLES AT TERMINATION/FAILURE: 21ives/
(3)
Interim Load A-16.20 kN
F₃ 14.14 kN

Origin lies on Bolt Hole surface
at the base of a shiver

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1836
	2480	.1635
	2380	.1390
	2280	.1190
	2180	.0978
	2080	.0807
	1980	.0643
	1880	.0505
	1780	.0378
	1680	.0289
	1580	.0219
	1480	.0161
	1380	.0123
One Life	1280	.0093
	1200	.0077
	1100	.0064
	1000	.0054
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

SPECIMEN NUMBER: XWPB-35A
SPECTRUM: Bomber
TEST DATE: A B C D E
TEST FRAME: 1 2 3 4 5
AVERAGE WIDTH: 1.5015 1.5012 1.5012 1.5024 1.5011
AVERAGE THICKNESS: 3.830 3.825 3.827 3.831 3.833 3.834
AREA: 5751 R-Qd 17025 (7060)
BASELINE STRESS: 31ksi C/S 43%
MAX. LOAD: 17827 Apt 713
CYCLES AT TERMINATION/FAILURE: 31ives/
(3)
Interim Load A-15.36 kN
F₃ 15.64 kN

Origin lies on Bolt Hole surface
at the base of a shiver.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0848
	2480	.0705
	2380	.0557
	2280	.0435
	2180	.0337
	2080	.0258
	1980	.0203
	1880	.0168
	1780	.0141
	1680	.0120
	1580	.0099
	1480	.0083
	1380	.0072
One Life	1280	.0061
	1200	.0055
	1100	.0047
	1000	.0038
	900	.0031
	800	.0027
	700	.0022
	600	.0019
	500	.0015
	400	.0010
	300	.0007
	200	.0004

FATIGUE TEST DATA

SPECIMEN NUMBER: KW 93-37 B

SPECTRUM: Bomber

TEST DATE: A F C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.501 1.501 1.501 1.501 1.501

AVERAGE THICKNESS: 3783 3783 3783 3783 3783

AREA: 5688 R-Q 1792.5 (7668)

BASILINE STRESS: 31 ksi Cal S 43%

MAX. LOAD: 17635 Apt. 705

CYCLES AT TERMINATION/FAILURE: 2 Lives /

③
Structure A-6.24 KII
B-14.26 KII

Origin lies on Bolt Hole surface
from a minor defect.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	2840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1283
	2480	.0888
	2380	.0783
	2280	.0559
	2120	.0432
	2080	.0324
	1980	.0276
	1880	.0222
	1780	.0178
	1680	.0138
	1580	.0106
	1480	.0085
	1380	.0068
One Life	1280	.0053
	1200	.0045
	1100	.0033
	1000	.0027
	900	.0022
	800	
	700	
	600	
	500	
	400	
	300	
	200	

2.2.3 IQPF
FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-1 T
SPECTRUM: Fighter
TEST DATE: _____
TEST FRAME: 1 2 ③ 4 5 (50)
AVERAGE WIDTH: 1.5017
AVERAGE THICKNESS: 3769 // 3758/3735/3764/3795/3795
AREA: 5659 Rcal 18382
BASELINE STRESS: 34 KSC Cal 3-9 98.6
AX. LOAD: 19,241.6 # 1 Life
CYCLES AT TERMINATION/FAILURE: 2 Lives/____

STATIC LOAD A - 17.5 K#
B - 17.72 K#

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-2 T
SPECTRUM: Fighter
TEST DATE: _____
TEST FRAME: 1 ② 3 4 5 (29)
AVERAGE WIDTH: 1.5025
AVERAGE THICKNESS: 3766 // 3751/3751/3756/3787/3792/
AREA: 5659 Rcal 18627
BASELINE STRESS: 34 KSC Cal 3-9 98.6
AX. LOAD: 19,239.6 1 Life
CYCLES AT TERMINATION/FAILURE: 2 Lives/____

STATIC LOAD A - 16.58 K#
B - 16.08 K#

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.00542/25-02594	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.06165	.00509
39	15600	.05656	.00662
38	15200	.04994	.00557
37	14800	.04437	.00540
36	14400	.03897	.00447
35	14000	.03450	.00486
34	13600	.02964	.00441
33	13200	.02523	.00300
32	12800	.02223	.00263
31	12400	.01960	.00273
30	12000	.01687	.00240
29	11600	.01447	.00197
28	11200	.01250	.00139
27	10800	.01111	.00111
26	10400	.01000	.00123
25	10000	.00877	.00110
24	9600	.00767	.00125
23	9200	.00642	.00078
22	8800	.00564	.00082
21	8400	.00482	.00075
20	8000	.00407	.00053
19	7600	.00354	.00051
18	7200	.00303	.00048
17	6800	.00255	.00034
16	6400	.00231	.00032
15	6000	.00189	.00033
14	5600	.00154	.00023
13	5200	.00133	.00034
12	4800	.00099	.00020
11	4400	.00079	.00019
10	4000	.00060	.00023
9	3600	.00037	.00016
8	3200	.00021	.00013
7	2800	.00008	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-4 A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (6) 17

VERAGE WIDTH: 1.5007

VERAGE THICKNESS: .3778 // .3775 / .3757 / .3743 / .3800 / .3797

REA: .5670 RCAL 15091

ASELINE STRESS: 34 KSI CAL SWING 94.0

AX. LOAD: 19,278.8 # A POT 771 1 Life

YCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A - 16.56 K#

B - 17.76 K#

ORIGIN LINE ON SURFACE WHICH MATCHES WITH
PLATE B NEAR CORNER

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-3 T

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (1) 2 3 4 5 (88)

VERAGE WIDTH: 1.5013

VERAGE THICKNESS: .3837 // .3852 / .3822 / .3847 / .3832 / .3834

REA: .5761 RCAL 8752

ASELINE STRESS: 34 KSI CAL SWING 95.7

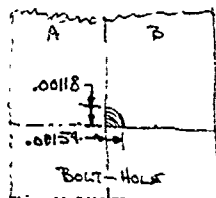
AX. LOAD: 19,587.7 # A POT 753 1 Life

YCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A - 17.68 K#

B - 18.22 K#



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FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.07510	.00473
39	15600	.07037	.00495
38	15200	.06542	.00518
37	14800	.05967	.00487
36	14400	.05480	.00410
35	14000	.05070	.00310
34	13600	.04760	.00252
33	13200	.04501	.00262
32	12800	.04246	.00361
31	12400	.03885	.00217
30	12000	.03668	.00261
29	11600	.03407	.00732
28	11200	.03175	.00209
27	10800	.02966	.00186
26	10400	.02780	.00216
25	10000	.02564	.00703
24	9600	.02361	.00193
23	9200	.02168	.00168
22	8800	.02000	.00180
21	8400	.01820	.00172
20	8000	.01658	.00118
19	7600	.01490	.00162
18	7200	.01328	.00128
17	6800	.01200	.00108
16	6400	.01092	.00019
15	6000	.01003	.00103
14	5600	.00900	.00107
13	5200	.00793	.00080
12	4800	.00713	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(152)

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-5 A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (16)

VERAGE WIDTH: 1.5006

VERAGE THICKNESS: 3739/3724/3722/3726/3765/3765

REA: .5611

ASELINE STRESS: 34ksi

AX. LOAD: 19,078.6 #

YCLES AT TERMINATION/FAILURE: _____

2 Lives/_____

STATIC LOAD A-17.40 K#

B-17.54 K#

ORIGIN LIES ON SURFACE WHICH MATES WITH

PLATE "B" NEAR CORNER

MATING SURFACES WERE MILLED



FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-5 A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 88

VERAGE WIDTH: 1.4995

VERAGE THICKNESS: 3790/3813/3760/3822/3777/3779

REA: .5683

ASELINE STRESS: 34ksi

AX. LOAD: 19,323.6 #

YCLES AT TERMINATION/FAILURE: _____

2 Lives/_____

STATIC LOAD - A-16.3 K#

B-16.36 K#

ORIGIN LIES ON SURFACE WHICH MATES WITH

PLATE "B" NEAR CORNER. MATING SURFACES

WERE MILLED.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0676	.0056
39	15600	.0620	.0054
38	15200	.0566	.0054
37	14800	.0525	.0050
36	14400	.0475	.0035
35	14000	.0440	.0033
34	13600	.0407	.0036
33	13200	.0371	.0034
32	12800	.0337	.0022
31	12400	.0315	.0025
30	12000	.0290	.0027
29	11600	.0263	.0029
28	11200	.0234	.0027
27	10800	.0207	.0016
26	10400	.0191	.0017
25	10000	.0174	.0019
24	9600	.0155	.0019
23	9200	.0136	.0024
22	8800	.0112	.0020
21	8400	.0092	.0020
20	8000	.0072	.0014
19	7600	.0058	.0014
18	7200	.0044	.0012
17	6800	.0032	.0009
16	6400	.0023	.0006
15	6000	.0017	.0004
14	5600	.0013	.0003
13	5200	.0011	.0004
12	4800	.0007	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-7A *

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 89

VERAGE WIDTH: 1.5023

VERAGE THICKNESS: 3781 // 3805 / 3764 / 3798 / 3764 / 3772

REA: .5680 R CAL. 10627

ASELINE STRESS: 34ksc CAL. 5-10 90-

AX. LOAD: 19,310.6# AP. 772 1 Life

CYCLES AT / FAILURE: *

2 Lives / _____

① 1,396,704 = 14,591.81

** Zero for SECONDARY ORIGIN LIES .0930 INCHES FROM PRIMARY ORIGIN.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
		PRIMARY	SECONDARY
40	16000		
39	15600		
38	15200		
37	14800	.5104	.4204
36	14400	.5068	.4168
35	14000	.3682	.2782
34	13600	.3008	.2108
33	13200	.2514	.1614
32	12800	.2181	.1281
31	12400	.1943	.1043
30	12000	.1760	.0860
29	11600	.1213	.0705
28	11200	.1564	.0584
27	10800	.0955	.0476
26	10400	.0824	.0383
25	10000	.0725	.0329
24	9600	.0649	.0277
23	9200	.0578	.0213
22	8800	.0521	.0184
21	8400	.0477	***
20	8000	.0432	
19	7600	.0403	
18	7200	.0376	
17	6800	.0349	
16	6400	.0322	
15	6000	.0293	
14	5600	.0273	
13	5200	.0250	
12	4800	.0229	
11	4400	.0209	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-8A *

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑥

VERAGE WIDTH: 1.5060

VERAGE THICKNESS: 3840 // 3856 / 3813 / 3850 / 3837 / 3845

EA: .5783

SELINE STRESS: 34ksc

X. LOAD: 19,663.4# 1 Life

CYCLES AT / FAILURE: *

2 Lives / _____

① 1,187,527 = 12,406.5 FLT-HRS *

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800	.5070	.0020
31	12400	.5050	.1660
30	12000	.3340	.0467
29	11600	.2956	.0315
28	11200	.2641	.0397
27	10800	.2244	.0280
26	10400	.1964	.0160
25	10000	.1804	.0205
24	9600	.1594	.0164
23	9200	.1495	.0206
22	8800	.1289	.0179
21	8400	.1110	.0156
20	8000	.0954	.0150
19	7600	.0804	.0103
18	7200	.0701	.0087
17	6800	.0614	.0082
16	6400	.0532	.0060
15	6000	.0472	.0054
14	5600	.0418	.0047
13	5200	.0371	.0044
12	4800	.0327	.0041
11	4400	.0286	.0041
10	4000	.0245	.0035
9	3600	.0210	.0033
8	3200	.0177	.0033
7	2800	.0144	.0022
6	2400	.0122	.0023
5	2000	.0099	.0025
4	1600	.0074	.0025
3	1200	.0249	
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-7A *
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 ② 3 4 5 89
 VERAGE WIDTH: 1.5023
 VERAGE THICKNESS: 3781 // 3805 / 3764 / 3798 / 3764 / 3772
 REA: .5680 R. CAL. 18027
 BASELINE STRESS: 34ksu CAL SWING 90-
 AX. LOAD: 19,310.6# AP 772 1 Life
 CYCLES AT FAILURE / FAILURE: *

2 Lives / _____
 @ 1,396,704 = 14,591.81
 ** ZERO FOR SECONDARY ORIGIN LIES .0900 INCHES FROM PRIMARY ORIGIN.

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.		INCREMENT IN.	
		PRIMARY	SECONDARY	PRIMARY	SECONDARY
40	16000				
39	15600				
38	15200				
37	14800	.5104	.4204	.0036	.0035
36	14400	.5068	.4168	.0036	.0036
35	14000	.3682	.2782	.0674	.0674
34	13600	.3008	.2108	.0494	.0494
33	13200	.2514	.1614	.0333	.0333
32	12800	.2181	.1281	.0238	.0238
31	12400	.1943	.1043	.0183	.0183
30	12000	.1760	.0860	.0155	.0155
29	11600	.1213	.2705	.0149	.0121
28	11200	.1064	.0584	.0129	.0108
27	10800	.0935	.0476	.0111	.0093
26	10400	.0824	.0383	.0099	.0084
25	10000	.0725	.0329	.0076	.0052
24	9600	.0649	.0277	.0071	.0064
23	9200	.0578	.0213	.0057	.0029
22	8800	.0521	.0184	.0044	
21	8400	.0477	**	.0045	
20	8000	.0432		.0029	
19	7600	.0403		.0027	
18	7200	.0376		.0027	
17	6800	.0349		.0027	
16	6400	.0322		.0029	
15	6000	.0293		.0020	
14	5600	.0273		.0023	
13	5200	.0250		.0022	
12	4800	.0228		.0019	
11	4400	.0209			
10	4000				
9	3600				
8	3200				
7	2800				
6	2400				
5	2000				
4	1600				
3	1200				
2	800				
1	400				

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-8A *
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 ⑥
 VERAGE WIDTH: 1.5063
 VERAGE THICKNESS: 3840 // 3856 / 3813 / 3850 / 3837 / 3845
 REA: .5783
 BASELINE STRESS: 34ksu
 X. LOAD: 19,663.4#
 CYCLES AT FAILURE / FAILURE: *

2 Lives / _____
 @ 1,187,527 = 12,406.5 FLT-HRS *

Blk #	FLIGHT HRS.	CRACK LENGTH IN.		INCREMENT IN.	
		PRIMARY	SECONDARY	PRIMARY	SECONDARY
40	16000				
39	15600				
38	15200				
37	14800				
36	14400				
35	14000				
34	13600				
33	13200				
32	12800	.5070		.0020	
31	12400	.5050		.0060	
30	12000	.3340		.0467	
29	11600	.2956		.0315	
28	11200	.2641		.0397	
27	10800	.2244		.0230	
26	10400	.1964		.0160	
25	10000	.1804		.0205	
24	9600	.1599		.0104	
23	9200	.1495		.0306	
22	8800	.1289		.0179	
21	8400	.1110		.0156	
20	8000	.0954		.0150	
19	7600	.0804		.0103	
18	7200	.0701		.0087	
17	6800	.0614		.0082	
16	6400	.0532		.0060	
15	6000	.0472		.0052	
14	5600	.0418		.0047	
13	5200	.0371		.0044	
12	4800	.0327		.0041	
11	4400	.0286		.0041	
10	4000	.0245		.0035	
9	3600	.0210		.0033	
8	3200	.0177		.0033	
7	2800	.0144		.0022	
6	2400	.0122		.0023	
5	2000	.0095		.0025	
4	1600	.0074		.0025	
3	1200	.0049			
2	800				
1	400				

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-9A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 (5) 16

VERAGE WIDTH: 1.5012

VERAGE THICKNESS: 3785 // 3773 / 3758 / 3721 / 3796 / 3800

REA: 5681 R CAL 18:32

ASELINE STRESS: 34 KSC CAL SW 93.5

AX. LOAD: 19,318.9 # APOT 7.72 1 Life

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD - A - 1462 K#

B - 1598 K#

ORIGIN LIES AT BOLT HOLE/SURFACE CORNER -

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 (4) 5

VERAGE WIDTH: 1.5034

VERAGE THICKNESS: 3790 // 3810 / 3760 / 3811 / 3782 / 3785

RFA: 5697 R CAL 18:54

ASELINE STRESS: 34 KSC CAL SW 93.4

AX. LOAD: 19,370.8 # APOT 7.74 1 Life

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STARTED 5/19 04:19:27

5/17 15: 7: 46

2 Lives/ 37: 11: 41

STATIC LOAD A - 1762 K#

B - 1810 K#

ORIGIN LIES ON SURFACE WHICH

MATES WITH PLATE B NEAR CORNER

0.0167 MATING SURFACES WERE MILLED

161

Bolt Hole 0.0153

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.1669	0.188
39	15600	0.1481	0.165
38	15200	0.1316	0.156
37	14800	0.1180	0.123
36	14400	0.1057	0.180
35	14000	0.0977	0.077
34	13600	0.0800	0.067
33	13200	0.0735	0.058
32	12800	0.0675	0.050
31	12400	0.0625	0.041
30	12000	0.0584	0.039
29	11600	0.0545	0.039
28	11200	0.0506	0.038
27	10800	0.0468	0.033
26	10400	0.0435	0.029
25	10000	0.0406	0.025
24	9600	0.0381	0.021
23	9200	0.0360	0.025
22	8800	0.0335	0.025
21	8400	0.0310	0.018
20	8000	0.0292	0.018
19	7600	0.0274	0.021
18	7200	0.0253	0.023
17	6800	0.0230	0.025
16	6400	0.0205	0.019
15	6000	0.0186	0.017
14	5600	0.0169	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-11

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 89 2

AVERAGE WIDTH: 1.5011 1.5006 1.4995 1.5022 1.5022

AVERAGE THICKNESS: .3785 .3774 .3762 .3770 .3811 .3810

AREA: .5682 RCAL 18627

BASELINE STRESS: _____ CALS 96%

MAX. LOAD: 19319.7 A.POT. 773

CYCLES AT TERMINATION/300000:

2 Lives/ _____

STATIC LOAD A-17.98 K#
B-17.84 K#

MATING SURFACES WERE MILLED

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000	.0000	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-12B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5

ERAGE WIDTH: 1.5000

ERAGE THICKNESS: .3770 .3756 .3753 .3762 .3794 .3787

EA: .5656 RCAL 18094

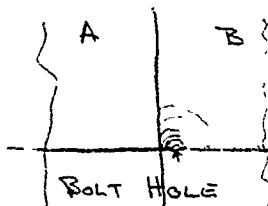
SELINE STRESS: 34KSC CAL 34.1

X. LOAD: 19229.0 A.POT 769

CLES AT TEPMINATION/300000:

2 Lives/ _____

STATIC LOAD A-17.18 K#
B-17.36 K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0355	.0020
39	15600	.0335	.0015
38	15200	.0320	.0014
37	14800	.0306	.0013
36	14400	.0293	.0014
35	14000	.0279	.0013
34	13600	.0266	.0014
33	13200	.0252	.0015
32	12800	.0237	.0010
31	12400	.0227	.0012
30	12000	.0215	.0011
29	11600	.0204	.0013
28	11200	.0191	.0010
27	10800	.0181	.0013
26	10400	.0168	.0013
25	10000	.0155	.0010
24	9600	.0145	.0011
23	9200	.0134	.0012
22	8800	.0122	.0010
21	8400	.0112	.0009
20	8000	.0103	.0010
19	7600	.0093	.0012
18	7200	.0081	.0011
17	6800	.0070	.0009
16	6400	.0061	.0009
15	6000	.0052	.0009
14	5600	.0043	.0007
13	5200	.0036	.0005
12	4800	.0031	.0006
11	4400	.0025	.0005
10	4000	.0020	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-13B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6 88

ERAGE WIDTH: 1.5018 1.5023 1.5016 1.5008 1.5012

ERAGE THICKNESS: .3782 .3769 .3774 .3771 .3797 .3799

EA: .5680 RCAL 18752

ELINE STRESS: 34KSI CS 97%

LOAD: 19311.3 A.P. 772

1 Life

LES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-16.74 K#
B-17.20 K#

ORIGIN LIES ON PLATE SURFACE, HATING
SURFACES WERE MILLED. FATIGUE ORIGIN
DUE TO TOOL MARKS & FRETTING.

FATIGUE TEST DATA

2 Lives

$\frac{1}{2} \text{ c} = .60$

SPECIMEN NUMBER: XQPF-14B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 88

ERAGE WIDTH: 1.4995

ERAGE THICKNESS: .3791 .3779 .3767 .3777 .3815 .3816

EA: .5684 RCAL 18752

SELINE STRESS: 34KSI CAL SWING 97%

X. LOAD: 19,326.6# A.P.T. 774 1 Life

CLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-18.18 K#
B-17.53 K#

ORIGIN LIES ON BOLT HOLE SURFACE NEAR
CORNER HAVING PLATE SURFACES WERE
MILLED

A B

BOLT HOLE

163

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0267	.0033
39	15600	.0234	.0026
38	15200	.0208	.0016
37	14800	.0192	.0020
36	14400	.0172	.0030
35	14000	.0152	.0021
34	13600	.0131	.0018
33	13200	.0117	.0018
32	12800	.0099	
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0052 / .0086	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

139

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-15B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6 (29)

ERAGE WIDTH: 1.4998

ERAGE THICKNESS: 3803/3784/3794/3794/3822/3819/

EA: .5703

SELINER STRESS: 34ksi

X. LOAD: 19,390.7#

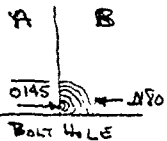
CLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-17.48 K#

B-17.64 K#

ORIGIN LIES ON SURFACE WHICH MATE WITH PLATE "A" NEAR CORNER



FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-16B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 6 (90)

ERAGE WIDTH: 1.4997

ERAGE THICKNESS: 3795/3795/3765/3796/3811/3809

EA: .5692

SELINER STRESS: 34ksi

X. LOAD: 19,351.6#

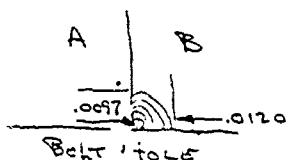
CLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-17.22 K#

B-17.70 K#

ORIGIN LIES ON SURFACE WHICH MATE WITH PLATE "A" NEAR CORNER.



164

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0145	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0097	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-17A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5 6 89

RAGE WIDTH: 1.5023 1.5024 1.5021 1.5025 1.5021

RAGE THICKNESS: .3817 .3807 .3805 .3809 .3835 .3827

A: .5734 E.CAL. 12627

E LINE STRESS: 34ksi C.S. 96%

. LOAD: 19494.5 A.P. 780

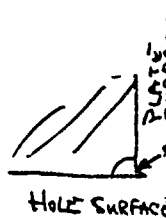
LES AT TERMINATION/FAILURE:

2 Lives/

TATIC LOAD A-16.06 K#
B-17.41 K#



ORIGIN* LIES ON PLATE SURFACE/BURR
INTERFACE.



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0141	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-18

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (6) (16)

RAGE WIDTH: 1.5001

RAGE THICKNESS: .3795 .3805 .3758 .3806 .3798 .3806

EA: .5692 E.CAL. 12652

SELINE STRESS: 34ksi CAL SW. 96.4

. LOAD: 19353.8# A.P. 774

CLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-17.38 K#
B-17.69 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0000	.0000
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-19B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 17

ERAGE WIDTH: 1.5001

ERAGE THICKNESS: .3772/.3755/.3752/.3760/.3797/.3792

EA: .5659 R CAL. 18478

SELIN STRESS: 34KSC CAL SWING 96.0

X. LOAD: 19,240.5# 7.70

CLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-17.59 K#

B-17.58 K#

COUNTED DOWN TO →

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0203	.0010
39	15600	.0193	.0013
38	15200	.0180	.0008
37	14800	.0172	.0009
36	14400	.0163	.0009
35	14000	.0154	.0010
34	13600	.0144	.0009
33	13200	.0135	.0010
32	12800	.0125	.0008
31	12400	.0117	.0007
30	12000	.0110	.0009
29	11600	.0101	.0007
28	11200	.0094	.0006
27	10800	.0088	.0006
26	10400	.0082	.0005
25	10000	.0077	.0006
24	9600	.0071	
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-20B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

ERAGE WIDTH: 1.5001

ERAGE THICKNESS: .3770/.3728/.3748/.3790/.3760/.3764

EA: .5655 R CAL 18094

SELIN STRESS: 34KSC CAL SWING 94.1%

X. LOAD: 19,228.3# APT 7.69

CLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-17.66 K#

B-17.08 K#

$$\frac{a}{2c} = .49$$

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0098 / 20 = .0202	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-21

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (17)

ERAGE WIDTH: 1.5000

ERAGE THICKNESS: .3820 // .3850 / .3803 / .3836 / .3800 / .3810

EA: .5730

SELINE STRESS: 34ksi

X. LOAD: ~~19,480.98~~ 19,481.0#

CLES AT TERMINATION/FAILURE:

2 Lives/ _____

OVERLOADED IN COMPRESSION (100%)
SPECIMEN WAS DESTROYED.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-21A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (1) 2 3 4 5 6 88

ERAGE WIDTH: 1.5021 | 1.5021 | 1.5023 | 1.5022 | 1.5018

ERAGE THICKNESS: .3794 | .3797 | .3785 | .3798 | .3795 | .3795

A: .5699

SELINE STRESS: 34ksi

X. LOAD: 19376.5

CLES AT TERMINATION/FAILURE:

2 Lives/ _____

TATIC LOAD A-17.24 K#
B-17.32 K#

ORIGIN LIES AT CORNER

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	<u>.0324</u>	<u>.0024</u>
39	15600	<u>.0300</u>	<u>.0015</u>
38	15200	<u>.0285</u>	<u>.0014</u>
37	14800	<u>.0271</u>	<u>.0013</u>
36	14400	<u>.0258</u>	<u>.0014</u>
35	14000	<u>.0244</u>	<u>.0015</u>
34	13600	<u>.0228</u>	<u>.0016</u>
33	13200	<u>.0212</u>	<u>.0015</u>
32	12800	<u>.0197</u>	<u>.0019</u>
31	12400	<u>.0178</u>	<u>.0017</u>
30	12000	<u>.0161</u>	<u>.0014</u>
29	11600	<u>.0147</u>	<u>.0016</u>
28	11200	<u>.0131</u>	<u>.0012</u>
27	10800	<u>.0119</u>	<u>.0014</u>
26	10400	<u>.0105</u>	<u>.0012</u>
25	10000	<u>.0093</u>	<u>.0015</u>
24	9600	<u>.0078</u>	<u>.0015</u>
23	9200	<u>.0063</u>	
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-22B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 ⑤ 16

ERAGE WIDTH: 1.5003 // 1.4996 // 1.5010 // 1.5010 // 1.4995

ERAGE THICKNESS: 3773 // 3760 // 3757 // 3759 // 3796 // 3795

EA: .5661 Rcal 18652

SELIN STRESS: 34ksi CAL 5000 97.0

X. LOAD: 19,248.2 # A.POT 770

CLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A-17.62 K#

B-17.63 K#

$$\frac{a}{2c} = .43$$

2 Lives

1 Life

FRACTOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.006 / 24 = .04	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-23B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑥ 17

ERAGE WIDTH: 1.4998 // 1.5005 // 1.4991 // 1.4989 // 1.5005 *

ERAGE THICKNESS: 3768 // 3753 // 3757 // 3757 // 3787 // 3787

EA: .5652 Rcal 1878

SELIN STRESS: 34ksi C.S. 96.1

X. LOAD: 19,215.3 # A.P. 770

CLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/ _____

@ 1,110,975 L.P. = 11,606.71 FLT-HRS *

ORIGIN : AT CORNER

2 Lives

1 Life

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000	.5289	.0075
29	11600	.5214	.0095
28	11200	.4119	.0392
27	10800	.3727	.0317
26	10400	.3410	.0282
25	10000	.3128	.0276
24	9600	.2852	.0298
23	9200	.2604	.0196
22	8800	.2408	.0169
21	8400	.2239	.0154
20	8000	.2085	.0131
19	7600	.1954	.0099
18	7200	.1855	.0091
17	6800	.1764	.0061
16	6400	.1703	.0063
15	6000	.1640	.0063
14	5600	.1577	.0048
13	5200	.1529	.0049
12	4800	.1480	.0035
11	4400	.1445	.0056
10	4000	.1389	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(168)

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-24B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 88

CRACK WIDTH: 1.5007 // 1.5005 // 1.5012 // 1.5010

CRACK THICKNESS: 3828 // 3824 // 3806 // 3821 // 3845 // 3834

EA: .5745 RCAL 18752

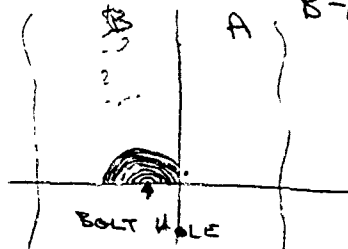
SELINE STRESS: 34ksi CS 96.4

X. LOAD: 19,531.9# AP 7.81 1 Life

CRACKS AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD A-16.62 K#
B-16.62 K#



FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-25A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 88

CRACK WIDTH: 1.5007 // 1.5014 // 1.4994 // 1.5011 // 1.5013

CRACK THICKNESS: 3787 // 3775 // 3773 // 3776 // 3804 // 3809

EA: .5683 RC 18617

SELINE STRESS: 34ksi CS 96.4

X. LOAD: 19,320.9# AP 7.73 1 Life

CRACKS AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A-15.2 K#
B-16.98 K#

ORIGIN LIES ON SURFACE WHICH MATES WITH PLATE 'B'. PLATE MATING SURFACES WERE MILLED.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.075	0.048
39	15600	0.367	0.035
38	15200	0.337	0.034
37	14800	0.294	0.035
36	14400	0.263	0.024
35	14000	0.239	0.020
34	13600	0.219	0.020
33	13200	0.199	0.016
32	12800	0.183	0.012
31	12400	0.171	0.013
30	12000	0.158	0.013
29	11600	0.145	0.011
28	11200	0.134	0.011
27	10800	0.123	0.010
26	10400	0.113	0.010
25	10000	0.103	0.009
24	9600	0.094	0.008
23	9200	0.086	0.008
22	8800	0.078	0.008
21	8400	0.070	0.007
20	8000	0.063	0.006
19	7600	0.057	0.006
18	7200	0.049	0.003
17	6800	0.047	0.005
16	6400	0.047	0.003
15	6000	0.038	0.004
14	5600	0.034	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.190	0.053
39	15600	0.737	0.062
38	15200	0.675	0.049
37	14800	0.626	0.046
36	14400	0.580	0.038
35	14000	0.542	0.036
34	13600	0.506	0.031
33	13200	0.475	0.032
32	12800	0.443	0.030
31	12400	0.413	0.026
30	12000	0.387	0.026
29	11600	0.361	0.023
28	11200	0.338	0.027
27	10800	0.311	0.021
26	10400	0.290	0.025
25	10000	0.265	0.020
24	9600	0.245	0.024
23	9200	0.221	0.021
22	8800	0.200	0.019
21	8400	0.181	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-26A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 80

ERAGE WIDTH: 1.5013 // 1.5013 / 1.5013 / 1.5013 / 1.5010

ERAGE THICKNESS: 3790 // 3790 / 3780 / 3795 / 3792

EA: 5591 RC 18382

SELINE STRESS: 34ksi CS 98%

X. LOAD: 19,347.8 # AP 7.7Y

CLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A - 16.86 K#

B - 17.10 K#



ORIGIN LIES AT CORNER

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-27B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑩

ERAGE WIDTH: 1.4996 // 1.4988 / 1.5002 / 1.5003 / 1.4992

ERAGE THICKNESS: 3802 // 3780 / 3795 / 3795 / 3804 / 3805

EA: 5701 RCAI 18652

SELINE STRESS: 34ksi CS 96.2%

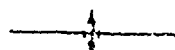
X. LOAD: 19,384.0 # AP 7.75

CLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A - 17.58 K#

B - 14.34 K#



ORIGIN LIES AT CORNER, STARTING FROM A "BURR."

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0426	.0029
39	15600	.0397	.0023
38	15200	.0374	.0022
37	14800	.0352	.0014
36	14400	.0338	.0017
35	14000	.0321	.0015
34	13600	.0306	.0016
33	13200	.0290	.0011
32	12800	.0279	.0008
31	12400	.0271	.0012
30	12000	.0259	.0007
29	11600	.0252	.0010
28	11200	.0242	.0011
27	10800	.0231	.0007
26	10400	.0224	.0006
25	10000	.0218	.0010
24	9600	.0208	.0010
23	9200	.0198	.0010
22	8800	.0188	.0009
21	8400	.0179	.0009
20	8000	.0170	.0009
19	7600	.0161	.0007
18	7200	.0154	.0007
17	6800	.0147	.0010
16	6400	.0137	.0010
15	6000	.0127	.0008
14	5600	.0119	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1184	.0149
39	15600	.1035	.0105
38	15200	.0930	.0171
37	14800	.0759	.0058
36	14400	.0701	.0051
35	14000	.0650	.0040
34	13600	.0590	.0032
33	13200	.0558	.0028
32	12800	.0530	.0027
31	12400	.0503	.0026
30	12000	.0477	.0025
29	11600	.0452	.0022
28	11200	.0430	.0024
27	10800	.0406	.0018
26	10400	.0388	.0020
25	10000	.0368	.0024
24	9600	.0344	.0020
23	9200	.0324	.0022
22	8800	.0302	.0019
21	8400	.0283	.0021
20	8000	.0262	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-28A

SPECTRUM: Fighter

TEST DATE: _____ (17)

TEST FRAME: 1 2 3 4 5

ERAGE WIDTH: 1.5014 // 1.5020 // 1.5005 // 1.5002 // 1.5028

ERAGE THICKNESS: .3807 // .3816 // .3793 // .3818 // .3802 // .3806

EA: .5715 Rcal 18034

SELINE STRESS: 34ksi CS 931K

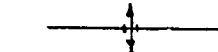
X. LOAD: 19,431.8# A.P. 777 1 Life

CLES AT TERMINATION/

2 Lives/

STATIC LOAD A-14.14 K#

B-15.86 K#



ORIGIN LIES AT CORNER.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1332	.0119
39	15600	.1213	.0095
38	15200	.1118	.0075
37	14800	.1023	.0086
36	14400	.0937	.0069
35	14000	.0868	.0062
34	13600	.0806	.0067
33	13200	.0739	.0057
32	12800	.0688	.0045
31	12400	.0643	.0038
30	12000	.0610	.0047
29	11600	.0563	.0030
28	11200	.0533	.0031
27	10800	.0502	.0023
26	10400	.0479	.0027
25	10000	.0452	.0013
24	9600	.0439	.0017
23	9200	.0422	.0012
22	8800	.0410	.0013
21	8400	.0397	.0016
20	8000	.0381	.0013
19	7600	.0368	.0021
18	7200	.0347	.0015
17	6800	.0332	.0021
16	6400	.0311	.0033
15	6000	.0288	.0033
14	5600	.0265	.0025
13	5200	.0240	.0023
12	4800	.0217	.0020
11	4400	.0197	.0021
10	4000	.0176	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-29B

SPECTRUM: Fighter

TEST DATE: _____ (88)

TEST FRAME: ① 2 3 4 5

ERAGE WIDTH: 1.4987 // 1.4990 // 1.4984 // 1.4978 // 1.4997

ERAGE THICKNESS: .3807 // .3802 // .3773 // .3802 // .3814 // .3811

EA: .5694 Rcal 18752

SELINE STRESS: 34ksi CS 96.9

X. LOAD: 19,361.2# AP 774 1 Life

CLES AT TERMINATION/

2 Lives/

STATIC LOAD A-17.16 K#

B-17.03 K#



ORIGIN LIES ON PLATE SURFACE NEAR CORNER.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0924	.0018
39	15600	.0906	.0021
38	15200	.0385	.0019
37	14800	.0366	.0017
36	14400	.0349	.0015
35	14000	.0334	.0014
34	13600	.0320	.0017
33	13200	.0303	.0013
32	12800	.0290	.0012
31	12400	.0278	.0010
30	12000	.0268	.0011
29	11600	.0257	.0009
28	11200	.0248	.0010
27	10800	.0238	.0009
26	10400	.0229	.0009
25	10000	.0220	.0008
24	9600	.0212	.0007
23	9200	.0203	.0011
22	8800	.0194	.0008
21	8400	.0186	.0010
20	8000	.0176	.0011
19	7600	.0165	.0007
18	7200	.0158	.0009
17	6800	.0149	
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-30A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 (80)

ERAGE WIDTH: 1.5029 // 1.5027 // 1.5030 // 1.5030 // 1.5030

ERAGE THICKNESS: .3809 // .3804 // .3799 // .3713 // .3719 // .3809

EA: .5724 Rcal 10627

SELINE STRESS: 34ksi C5 057

X. LOAD: 19,461.4# AD 178

CLES AT TERMINATION/

2 Lives/

STATIC LOAD A-15.08 K#
B-13.58 K#

ORIGIN LIES AT CORNER.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1962	.0211
39	15600	.1751	.0178
38	15200	.1573	.0152
37	14800	.1421	.0145
36	14400	.1276	.0145
35	14000	.1131	.0116
34	13600	.1013	.0175
33	13200	.0930	.0098
32	12800	.0832	.0080
31	12400	.0752	.0074
30	12000	.0678	.0075
29	11600	.0603	.0059
28	11200	.0544	.0034
27	10800	.0510	.0038
26	10400	.0472	.0042
25	10000	.0430	.0044
24	9600	.0386	.0036
23	9200	.0350	.0033
22	8800	.0317	.0024
21	8400	.0293	.0023
20	8000	.0270	.0027
19	7600	.0243	.0024
18	7200	.0219	.0024
17	6800	.0195	.0021
16	6400	.0174	.0019
15	6000	.0155	.0021
14	5600	.0134	.0014
13	5200	.0125	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-31B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 (90)

ERAGE WIDTH: 1.5043 // 1.5046 // 1.5040 // 1.5016 // 1.5070

ERAGE THICKNESS: .3794 // .3780 // .3778 // .3786 // .3816 // .3712

EA: .5708 Rcal 10982

SELINE STRESS: 34ksi LS 978

X. LOAD: 19,406.9# AD 776

CLES AT /FAILURE: *

2 Lives/

@ 1,443,272 L.P. = 15,078.32 FLT-HRS *

Origin lies on Bolt Hole surface
Starting from a shiver.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38		.4413	.1179
37	14300	.3234	.0570
36	14400	.2664	.0590
35	14000	.2174	.0542
34	13600	.1832	.0282
33	13200	.1570	.0173
32	12800	.1377	.0166
31	12400	.1211	.0143
30	12000	.1068	.0130
29	11600	.0938	.0111
28	11200	.0827	.0099
27	10800	.0728	.0076
26	10400	.0652	.0058
25	10000	.0459	.0060
24	9600	.0394	.0046
23	9200	.0348	.0045
22	8800	.0303	.0031
21	8400	.0272	.0032
20	8000	.0240	.0026
19	7600	.0214	.0023
18	7200	.0191	.0023
17	6800	.0168	.0027
16	6400	.0141	.0022
15	6000	.0119	.0018
14	5600	.0101	.0017
13	5200	.0084	.0014
12	4800	.0078	.0015
11	4400	.0056	.0008
10	4000	.0047	.0009
9	3600	.0038	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-32B *

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5 (15)

ERAGE WIDTH: 1.5003/1.5002/1.5006/1.4996/1.5009

ERAGE THICKNESS: 3766/3759/3748/3753/3783/3784

EA: .5651

REAL 18478

BASELINE STRESS: 34 KSI

C = 96.2

X. LOAD: 19,212.5 #

AP 7.70

CLES AT FAILURE *

1 Life

2 Lives/

@ 1404,990 LRS = 14,678.37 FLT-HRS. *

Origin lies on Plate surface near corner.

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800	.5415	.1700
36	14400	.3715	.0768
35	14000	.2947	.0425
34	13600	.2522	.0312
33	13200	.2210	.0212
32	12800	.1948	.0249
31	12400	.1699	.0199
30	12000	.1500	.0174
29	11600	.1326	.0147
28	11200	.1172	.0118
27	10800	.1059	.0107
26	10400	.0952	.0097
25	10000	.0855	.0091
24	9600	.0764	.0076
23	9200	.0678	.0065
22	8800	.0623	.0063
21	8400	.0560	.0060
20	8000	.0500	.0060
19	7600	.0440	.0064
18	7200	.0374	.0059
17	6800	.0315	.0049
16	6400	.0267	.0037
15	6000	.0230	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Fracture damaged by Rubbing on itself

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-33B *

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 15 ④

AVERAGE WIDTH: 1.5007 1.5015 1.5016 1.5001 1.4999

AVERAGE THICKNESS: 3771 3793 3764 3784 3760 3755

AREA: .5659

REAL 18478

BASELINE STRESS: 34 KSI

CALS 96%

MAX. LOAD: 19242.1

A.POT. 7.70

CYCLES AT FAILURE *

2 Lives/

1 @ 1,381,708 LRS = 14,435.14 FLT-HRS *

STATIC LOAD A- K#
B- K#

Origin lies at Corner

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000		
39	15600		
38	15200		
37	14800	.3651	.0025
36	14400	.3636	.0779
35	14000	.2847	.0469
34	13600	.2378	.0362
33	13200	.2016	.0282
32	12800	.1734	.0246
31	12400	.1488	.0175
30	12000	.1313	.0155
29	11600	.1148	.0138
28	11200	.1010	.0105
27	10800	.0905	.0099
26	10400	.0811	.0088
25	10000	.0723	.0081
24	9600	.0642	.0063
23	9200	.0579	.0041
22	8800	.0538	.0063
21	8400	.0485	.0034
20	8000	.0451	.0041
19	7600	.0410	.0048
18	7200	.0362	.0034
17	6800	.0328	
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Fracture damaged by Rubbing on itself

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-34B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6

RAGE WIDTH: 1.4982 1.4987 1.4993 1.4978 1.4969

RAGE THICKNESS: .3786 .3783 .3775 .3788 .3792 .3790

A: 5672 R.C.A. 18679

ELINE STRESS: 34ksi C.S. 97%

. LOAD: 19293.4 AP 7.71

LES AT TERMINATION/

2 Lives/

TATIC LOAD A-17.22 K#
B-11.34 K#

Origin lies at corner

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	1769	029
39	15600	1530	0184
38	15200	1346	0149
37	14800	1197	0129
36	14400	1068	0101
35	14000	0967	0092
34	13600	0875	0075
33	13200	0800	0060
32	12800	0740	0060
31	12400	0680	0044
30	12000	0636	0039
29	11600	0597	0034
28	11200	0563	0032
27	10800	0531	0025
26	10400	0506	0013
25	10000	0493	0021
24	9600	0472	0028
23	9200	0444	0028
22	8800	0416	0027
21	8400	0389	0021
20	8000	0368	0022
19	7600	0346	0024
18	7200	0322	0018
17	6800	0304	0023
16	6400	0281	0021
15	6000	0260	0022
14	5600	0238	0024
13	5200	0214	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Fracture Damaged
by Ripping
study

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-35A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 6 90

RAGE WIDTH: 1.4989 1.4996 1.5000 1.4986 1.4977

RAGE THICKNESS: .3797 .3801 .3791 .3802 .3795 .3796

A: 5691 R.C.A. 18982

ELINE STRESS: 34ksi C.S. 98%

. LOAD: 19350.5 A.P. 7.74

LES AT TERMINATION/

2 Lives/

TATIC LOAD A-12.06 K#
B-11.36 K#

ORIGIN LIES AT CORNER STARTING
FROM A BURR.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	2530	0303
39	15600	2227	0279
38	15200	1948	0219
37	14800	1729	0203
36	14400	1526	0166
35	14000	1360	0120
34	13600	1240	0137
33	13200	1103	0093
32	12800	1010	0113
31	12400	0897	0082
30	12000	0815	0077
29	11600	0738	0075
28	11200	0663	0064
27	10800	0599	0054
26	10400	0545	0051
25	10000	0494	0049
24	9600	0445	0047
23	9200	0398	0046
22	8800	0352	0039
21	8400	0315	0043
20	8000	0270	0028
19	7600	0244	0022
18	7200	0220	0029
17	6800	0191	0019
16	6400	0172	0020
15	6000	0152	0022
14	5600	0135	0020
13	5200	0110	0018
12	4800	0092	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1790

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF-36A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 88 ①

AVERAGE WIDTH: 1.5021 1.5011 1.5018 1.5030 1.5026

AVERAGE THICKNESS: .3761 .3787 .3744 .3763 .3768 .3741

AREA: .5649 RCAL. 18752

BASLINE STRESS: 34ksi CALS 98%

MAX. LOAD: 19205.9 A.POT. 7.68

CYCLES AT TERMINATION/ ~~XXXXXX~~

2 Lives/ _____

STATIC LOAD A-16.53 K#
B-16.80 K#



ORIGIN LIES AT CORNER STARTING FROM A BURR.

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPF 37A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 90 ③

AVERAGE WIDTH: 1.5004 1.4993 1.5000 1.5013 1.5013

AVERAGE THICKNESS: .3809 .3805 .3811 .3801 .3816 .3816

AREA: .5716 RCAL. 18982

BASLINE STRESS: _____ CALS 98%

MAX. LOAD: 19435.2 A.POT. 7.77

CYCLES AT TERMINATION/ ~~XXXXXX~~

2 Lives/ _____

STATIC LOAD A-17.85 K#
B-17.20 K#



ORIGIN LIES ON BOLT HOLE SURFACE

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000	.0605	.0045
39	15600	.0560	.0035
38	15200	.0525	.0054
37	14800	.0471	.0032
36	14400	.0439	.0035
35	14000	.0414	.0019
34	13600	.0385	.0023
33	13200	.0362	.0019
32	12800	.0343	.0019
31	12400	.0324	.0022
30	12000	.0302	.0017
29	11600	.0285	.0014
28	11200	.0271	.0014
27	10800	.0257	.0015
26	10400	.0242	.0017
25	10000	.0225	.0013
24	9600	.0212	.0012
23	9200	.0200	.0012
22	8800	.0188	.0008
21	8400	.0180	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

fracture damaged
by rubbing of
crack

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCR
40	16000	.0105	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

17

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: XQPF-38A

SPECTRUM: Fighter

TEST DATE: _____ 15

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.4929 1.4937 1.4930 .5001 1.5007

RAGE THICKNESS: 3.797 3.810 3.795 3.803 3.785 3.784

A: .5635 R_{CAI} 18478

ELINE STRESS: 34ksi C S 45

. LOAD: 19361.4 AP 7.74

LES AT TERMINATION/

2 Lives/

TATIA. LOAD A=12.44 K#

B=13.20 K#



ORIGIN LIES AT CORNER

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.2624	.0294
39	15600	.2330	.0239
38	15200	.2091	.0201
37	14800	.1890	.0215
36	14400	.1675	.0175
35	14000	.1500	.0168
34	13600	.1332	.0140
33	13200	.1192	.0113
32	12800	.1079	.0101
31	12400	.0978	.0094
30	12000	.0884	.0078
29	11600	.0806	.0061
28	11200	.0745	.0065
27	10800	.0680	.0054
26	10400	.0616	.0048
25	10000	.0568	.0048
24	9600	.0520	.0031
23	9200	.0489	.0044
22	8800	.0445	.0035
21	8400	.0410	.0026
20	8000	.0384	.0025
19	7600	.0359	.0028
18	7200	.0331	.0028
17	6800	.0313	.0026
16	6400	.0297	.0017
15	6000	.0280	.0021
14	5600	.0259	.0021
13	5200	.0238	.0025
12	4800	.0213	.0022
11	4400	.0191	.0023
10	4000	.0168	.0017
9	3600	.0151	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Fracture damaged
by pulling on
study

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

2.2.4 XQPE

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-1B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.4989 1.4981 1.4971 1.4999 1.5004

AVERAGE THICKNESS: .3785 .3780 .3765 .3797 .3792 .3791

AREA: .5673 8100

BASILINE STRESS: 33 KSI CALS 43%

MAX. LOAD: 18721 A.POT. 749

CYCLES AT ~~FAILURE~~/FAILURE: *

2 Lives/ _____

@ 747,488 LP = 2899.00 FLTS *

STATIC LOAD A- K#

B- K#

Origin lies on Bolt Hole surface
near corner.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-2B

SPECTRUM: Bomber

TEST DATE: _____

AVERAGE WIDTH: 1.5009 1.5016 1.5019 1.5005 1.4998

AVERAGE THICKNESS: .3785 .3769 .3721 .3769 .3736 .3730

AREA: .5621 80470

BASILINE STRESS: 33 KSI CALS 43%

MAX. LOAD: 1850 A.POT. 742

CYCLES AT ~~FAILURE~~/FAILURE: *

2 Lives/ _____

@ 737,092 LP = 2858.69 FLTS *

STATIC LOAD A- K#

B- K#

Origin lies at corner. Both plate
surfaces were milled.

FLIGHT LOG	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT LOG	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

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FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-3B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5012 1.506 1.5013 1.5013 1.5007

AVERAGE THICKNESS: .3729 .3799 .3774 .3808 .3782 .3781

A REA: .5688 7957
RCAL 16652

BASLINE STRESS: 33 KSI CALS 42%

MAX. LOAD: 18769 A.POT. 7.51

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/ _____

@ 706,204 L.P.s = 2738.89 FLTS.*
STATIC LOAD A- K#
B- K#

Origin lies on Plate surface near
corner. Fatigue initiation was
due to Grinding

TENSION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-4B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5014 1.5017 1.5017 1.5009 1.5012

AVERAGE THICKNESS: .3752 .3766 .3744 .3757 .3748 .3747

A REA: .5634 7668
RCAL 47025

BASLINE STRESS: 33 KSI CALS 41%

MAX. LOAD: 18591 A.POT. 7.41

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/ _____

@ 788,668 L.P.s = 3058.71 FLTS.*
STATIC LOAD A- K#
B- K#

Origin lies on Bolt Hole surface near
corner. Both plate surfaces were
milled.

174
178

FLIGHT XXXX	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT XXXX	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	2960	
	2860	
	2760	
	2660	
	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-5B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5003 / 1.4998 / 1.5006 / 1.5007
AVERAGE THICKNESS: .3019 / .3018 / .3017 / .3024 / .3012 / .3023
AREA: 15729 R-Cal 185.82 (8100)
Cal.S 43%
BASELINE STRESS: 33Ksi Apt 756
MAX. LOAD: 18906
CYCLES AT TERMINATION/PRESSURE: 2 Lives/
@
STATIC LOAD A-17.70 K#
B-16.60 K#

Origin lies on Plate Surface near corner
origin initiation was due to fretting.

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-6B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5021 / 1.5033 / 1.5036 / 1.5014 / 1.5000
AVERAGE THICKNESS: .3765 / .3812 / .3760 / .3815 / .3774 / .3765
AREA: .5686 R-Cal 7834 (7834)
Cal.S 42%
BASELINE STRESS: _____ Apt 751
MAX. LOAD: 18763
CYCLES AT TERMINATION/PRESSURE: 2 Lives/
@
STATIC LOAD A-17.20 K#
B-17.52 K#

Origin lies at corner both surfaces milled
A secondary origin due to mill
tool marks (relaxed tolerance?)

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FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0408
	2480	.0350
	2380	.0302
	2280	.0263
	2180	.0231
	2080	.0197
	1980	.0179
	1880	.0152
	1780	.0135
	1680	.0118
	1580	.0098
	1480	.0083
	1380	.0072
One Life	1280	.0063
	1200	.0054
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Fracture damaged
by rubbing on
tool

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0408
	2480	.0356
	2380	.0325
	2280	.0194
	2180	.0165
	2080	.0143
	1980	.0120
	1880	.0100
	1780	.0085
	1680	.0071
	1580	.0054
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Fracture Surface
damaged by rubbing
on tool

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FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-7A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
AVERAGE WIDTH: 1.5018 / 1.4988 / 1.5010 / 1.5058 / 1.5016
AVERAGE THICKNESS: 1.3799 / 1.3824 / 1.3771 / 1.3825 / 1.3788 / 1.3791
AREA: .5707 R-Cal 18652 (795)
Cal.S 42%
BASELINE STRESS: _____ Apt 753
MAX. LOAD: 18832
CYCLES AT TERMINATION/~~REVERSE~~: 2 3 Lives
②
STATIC LOAD A-15.88 K#
B-16.58 K#

Origin lies at corner. Both surfaces were milled.

Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-8B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
AVERAGE WIDTH: 1.4999 / 1.4997 / 1.5006 / 1.5003 / 1.4993
AVERAGE THICKNESS: 1.3776 / 1.3791 / 1.3771 / 1.3788 / 1.3768 / 1.3761
AREA: .5664 R-Cal 17925 (7668)
Cal.S 41%
BASELINE STRESS: _____ Apt 748
MAX. LOAD: 18689
CYCLES AT TERMINATION/~~REVERSE~~: 2 4 Lives
②
STATIC LOAD A-14.89 K#
B-13.95 K#

Origin lies at corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0946
	2480	.0820
	2380	.0687
	2280	.0575
	2180	.0493
	2080	.0420
	1980	.0366
	1880	.0324
	1780	.0286
	1680	.0258
	1580	.0230
	1480	.0214
	1380	.0194
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Fracture Damaged by Rubbing on itself

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1674
	2480	.1416
	2380	.1151
	2280	.0924
	2180	.0751
	2080	.0614
	1980	.0499
	1880	.0399
	1780	.0323
	1680	.0278
	1580	.0243
	1480	.0203
	1381	.0171
One Life	1280	.0136
	1200	.0114
	1100	.0081
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	

Fracture Damaged by Rubbing on itself

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-9A
SPECTRUM: Bomber
TEST DATE: AB CDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4998 / 1.4997 / 1.5002 / 1.5001 / 1.4991
AVERAGE THICKNESS: 3813 / 3817 / 3784 / 3822 / 3820 / 3823
AREA: 5719 R-Cal 8100
Cal.S 429
BASELINE STRESS: 33Ksi Appt 7.55
MAX. LOAD: 18872.8
CYCLES AT TERMINATION/FAILURE: 2 @ Lives / 660078

②
STATIC LOAD A-16.15 K#
B-17.86 K#

Origin lies on Plate surface
near corner due to peeling.

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-10B
SPECTRUM: Bomber
TEST DATE: AB CDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5045 / 1.5030 / 1.5029 / 1.5050 / 1.5053
AVERAGE THICKNESS: 3790 / 3799 / 3794 / 3801 / 3798 / 3799
AREA: 5714 R-Cal 10082 (8100)
Cal.S 435
BASELINE STRESS: 33K Appt 7.54
MAX. LOAD: 18857
CYCLE: AT TERMINATION/FAILURE: 2 @ Lives /

②
STATIC LOAD A-17.52 K#
B-17.50 K#

Origin lies on Bolt Hole surface

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	0757
	2480	0621
	2380	0497
	2280	0387
	2180	0303
	2080	0228
	1980	0192
	1880	0151
	1780	0118
	1680	0082
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Fracture Damage
by Rubbing on itself

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	a 2c
	2760	%cr .53
	2660	
Two Lives	2560	0177 / .0333
	2480	0152
	2380	0130
	2280	0111
	2180	0095
	2080	0081
	1980	0072
	1880	0064
	1780	0058
	1680	0050
	1580	0044
	1480	0041
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Origin Damaged by
Rubbing on itself

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FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-11B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.4998 / 1.4988 / 1.4994 / 1.5007 / 1.5003
AVERAGE THICKNESS: .3808 / .3815 / .3801 / .3812 / .3813 / .3800
AREA: .5712 R-Cal 18478 (7894)
BASELINE STRESS: 33 Ksi Cal.S 42%
MAX. LOAD: 18848 Apt 7.54
CYCLES AT TERMINATION/FAILURE: 2 Lives/
@
STATIC LOAD A-16.01 K#
B-1652 K#

Origin lies on Plate surface near
corner due to fretting.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB 12B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5002 / 1.4993 / 1.4945 / 1.5010 / 1.5008
AVERAGE THICKNESS: .3820 / .3820 / .3799 / .3804 / .3813 / .3844
AREA: .5731 R-Cal 7894
BASELINE STRESS: 33 Ksi Cal.S 41.7
MAX. LOAD: 18911.5 Apt 7.57
CYCLES AT TERMINATION/FAILURE: 2 Lives/
@
STATIC LOAD A-17.88 K#
B-17.28 K#

Origin lies on Bolt Hole surface.
Both plate surfaces were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0516
	2480	.0467
	2380	.0415
	2280	.0370
	2180	.0324
	2080	.0291
	1980	.0262
	1880	.0228
	1780	.0196
	1680	.0169
	1580	.0147
	1480	.0126
	1380	.0106
One Life	1280	.0087
	1200	.0076
	1100	.0059
	1000	.0049
	900	.0039
	800	.0027
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0198
	2480	.0162
	2380	.0132
	2280	.0111
	2180	.0094
	2080	.0079
	1980	.0065
	1880	.0053
	1780	.0047
	1680	.0039
	1580	.0032
	1480	.0027
	1380	.0023
One Life	1280	.0019
	1200	.0014
	1100	.0011
	1000	.0012
	900	.0009
	800	.0007
	700	.0005
	600	
	500	
	400	
	300	
	200	

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FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-13B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5014 / 1.5014 / 1.5021 / 1.5015 / 1.5001

AVERAGE THICKNESS: .3833 / .3841 / .3831 / .3852 / .3818 / .3824

AREA: .5755 R-Cal 18652.67957

BASELINE STRESS: 33KSI Cal S 42%

MAX. LOAD: 18992 Apt 7.60

CYCLES AT TERMINATION/FAILURE: 2 Lives

②
STATIC LOAD B-1540 K#
A-1798 K#

Origin lies on bolt hole surface.
Both surfaces were milled.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-14A

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5002 / 1.4994 / 1.4997 / 1.5005 / 1.5010

AVERAGE THICKNESS: .3802 / .3794 / .3778 / .3783 / .3732 / .3724

AREA: .5704 R-Cal 7957

BASELINE STRESS: 33KSI Cal S 42.3

MAX. LOAD: 18823.4 Apt 7.53

CYCLES AT TERMINATION/FAILURE: 2 Lives

②
STATIC LOAD A-1400 K#
B-1588 K#

Origin lies on Bolt Hole surface.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0918
	2480	.0735
	2380	.0543
	2280	.0413
	2180	.0304
	2080	.0236
	1980	.0183
	1880	.0150
	1780	.0122
	1680	.0100
	1580	.0088
	1480	.0073
	1380	.0062
One Life	1280	.0054
	1200	.0050
	1100	.0042
	1000	.0038
	900	.0032
	800	.0027
	700	.0021
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1434
	2480	.1092
	2380	.0767
	2280	.0538
	2180	.0380
	2080	.0287
	1980	.0218
	1880	.0171
	1780	.0134
	1680	.0107
	1580	.0082
	1480	.0063
	1380	.0048
One Life	1280	.0039
	1200	.0031
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

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FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-15B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5025 / 1.5021 / 1.5026 / 1.5017 / 1.5016
AVERAGE THICKNESS: .3818 / .3823 / .3826 / .3831 / .3809 / .3818
AREA: .5737 R-Cal 179.25 (7660)
BASELINE STRESS: 33Ksi Cal.S 41%
MAX. LOAD: 18932 Apt 7.57

CYCLES AT TERMINATION/FAILURE: 2 8Lives/

②

STATIC LOAD A-17.15 K#
B- K#?

origin lies on Plate surface near corner

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-17B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5032 / 1.5046 / 1.5047 / 1.5044 / 1.5018
AVERAGE THICKNESS: .3830 / .3852 / .3801 / .3851 / .3823 / .3822
AREA: .5757 R-Cal 7668
BASELINE STRESS: 33Ksi Cal.S 40.4
MAX. LOAD: 18998.0 Apt 7.60

CYCLES AT TERMINATION/FAILURE: 2 8Lives/

②

STATIC LOAD A-18.01 K#
B-17.78 K#

$$\frac{a}{2c} = .50$$

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0783
	2480	.0649
	2380	.0535
	2280	.0462
	2180	.0406
	2080	.0349
	1980	.0307
	1880	.0258
	1780	.0213
	1680	.0186
	1580	.0159
	1480	.0138
	1380	.0116
One Life	1280	.0101
	1200	.0090
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0075 / .0150
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Perc Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-18A
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5026 / 1.5063 / 1.5053 / 1.5028 / 1.5024
AVERAGE THICKNESS: 3.824 / 3.823 / 3.797 / 3.814 / 3.840 / 3.846
AREA: .5745 R-Cal 8100 (18982)
BASELINE STRESS: 33Ksi Cal.S 42.7
MAX. LOAD: 18958.5 Apt. 7.58
CYCLES AT TERMINATION/FAILURE: 2 @ Lives / 660078

①
STATIC LOAD A-15.72 K#
B-17.68 K#

↑
origin lies on Plate surface near
corner.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-21A
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5012 / 1.5022 / 1.5021 / 1.5007 / 1.5002
AVERAGE THICKNESS: 3.860 / 3.723 / 3.776 / 3.725 / 3.832 / 3.832
AREA: .5713 R-Cal 18652 (7957)
BASELINE STRESS: 31Ksi Cal.S 45%
MAX. LOAD: 17709 Apt. 7.08
CYCLES AT TERMINATION/FAILURE: 2 @ Lives /

①
STATIC LOAD A-16.08 K#
B-16.92 K#

• • •
origin lies on Bolt Hole Surface.
Both plate surfaces were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1100
	2480	.0934
	2380	.0764
	2280	.0641
	2180	.0537
	2080	.0453
	1980	.0393
	1880	.0342
	1780	.0304
	1680	.0261
	1580	.0223
	1480	.0187
	1380	.0153
One Life	1280	.0129
	1200	.0110
	1100	.0086
	1000	.0070
	900	.0059
	800	.0041
	700	
	600	
	500	
	400	
	300	
	200	

Fracture is Damaged
by rubbing on shelf

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0253
	2480	.0219
	2380	.0184
	2280	.0151
	2180	.0124
	2080	.0105
	1980	.0087
	1880	.0073
	1780	.0060
	1680	.0049
	1580	.0039
	1480	.0031
	1380	.0024
One Life	1280	.0019
	1200	.0015
	1100	.0013
	1000	.0009
	900	.0007
	800	.0006
	700	.0005
	600	
	500	
	400	
	300	
	200	

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GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-22B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5004 1.5016 1.5003 1.4998 1.5000

AVERAGE THICKNESS: .3812 .3804 .3785 .3795 .3843 .3834

AREA: .5720 R-Cal 10982 (B100)

BASLINE STRESS: 33 ksc Cal.S 46%

MAX. LOAD: 17732 Apt 7.10

CYCLES AT TERMINATION/FAILURE: 3 Lives/

②
STATIC LOAD A-17.38 K#
B-17.56 K#

Origin lies at corner.
which mates with Plate A.



FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	a b
	2760	
	2660	
Two Lives	2560	.0180 / .0184
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-23A

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5002 1.5005 1.5012 1.5004 1.4990

AVERAGE THICKNESS: .3801 .3784 .3781 .3792 .3823 .3828

AREA: .5702 R-Cal 7894 (B100)

BASLINE STRESS: 33 ksc Cal.S 42.0

MAX. LOAD: 18816.6 Apt 7.53

CYCLES AT TERMINATION/FAILURE: 2 Lives/

②
STATIC LOAD A-16.08 K#
B-16.40 K#

Origin lies at corner starting
from a burr. Both plate surfaces
were milled.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	2840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0534 .0076
	2480	.0458 .0079
	2380	.0384 .0066
	2280	.0318 .0051
	2180	.0267 .0043
	2080	.0224 .0042
	1980	.0182 .0031
	1880	.0151 .0026
	1780	.0125 .0019
	1680	.0106 .0019
	1580	.0087 .0029
	1480	.0063 .0010
	1380	.0053 .0006
One Life	1280	.0047 .0006
	1200	.0039 .0008
	1100	
	1000	
	900	origin damaged by
	800	bulging on itself
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-25A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5028 1.5013 1.5024 1.5044 1.5029
AVERAGE THICKNESS: 3.734 3.807 3.721 3.819 3.793 3.721
AREA: 1.5702 R-Cal 18478 (7834)
BASELINE STRESS: 31ksi Cal.S 45%
MAX. LOAD: 17675 Apt. 707
CYCLES AT TERMINATION/FAILURE: 2 Lives/
@
STATIC LOAD A-1588 K#
B-1784 K#

Origin lies on plate surface
near corner. Both surfaces
were milled.

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-26B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5020 1.5024 1.5017 1.5020 1.5022
AVERAGE THICKNESS: 3.797 3.820 3.780 3.825 3.781 3.783
AREA: 1.5703 R-Cal 7957 (18652)
BASELINE STRESS: 33ksi Cal.S 42.3
MAX. LOAD: 18819.9 Apt. 7.53
CYCLES AT TERMINATION/FAILURE: 2 Lives/
@
STATIC LOAD A-1652 K#
B-1646 K#

Origin lies on plate surface near
corner. Origin due to fretting.

FRACTOGRAPHIC DATA

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0170
	2480	.0167
	2380	.0148
	2280	.0126
	2180	.0126
	2080	.0110
	1980	.0136
	1880	.0283
	1780	.0241
	1680	.0203
	1580	.0170
	1480	.0145
	1380	.0125
One Life	1280	.0109
	1200	.0100
	1100	.0089
	1000	.0083
	900	.0075
	800	.0068
	700	.0061
	600	.0053
	500	.0047
	400	
	300	
	200	

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0475
	2480	.0423
	2380	.0355
	2280	.0300
	2180	.0247
	2080	.0202
	1980	.0161
	1880	.0141
	1780	.0130
	1680	.0097
	1580	.0079
	1480	.0060
	1380	.0048
One Life	1280	.0037
	1200	.0030
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Origin damaged by
Rudding on itself

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GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-27B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E (F)
AVERAGE WIDTH: 1.4991 // 1.4986 / 1.4975 / 1.4996 / 1.4989
AVERAGE THICKNESS: 3828 // 3832 / 3806 / 3834 / 3833 / 3837
AREA: 5738 R-Cal 7668 (1732)
BASELINE STRESS: 33ksi Cal.S 90.5 *
MAX. LOAD: 18935.4 Apt 7.57 *
CYCLES AT ~~TERMINATION~~ / FAILURE: 2 3 Lives / 660078
@ 630688 L.P.'s = 2446.02 *
STATIC LOAD A- K#
B- K#
Origin lies on Bolt Hole surface

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-28B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B (C) D E F
AVERAGE WIDTH: 1.5010 // 1.5006 / 1.5006 / 1.5015 / 1.5013
AVERAGE THICKNESS: 3808 // 3806 / 3801 / 3817 / 3802 / 3816
AREA: 5716 R-Cal 18992 (8100)
BASELINE STRESS: 33ksi Cal.S 4396
MAX. LOAD: 18864 Apt 7.55
CYCLES AT TERMINATION/FAILURE: 2 3 Lives / _____
①
STATIC LOAD A- 17.20 K#
B- 17.40 K#
Origin lies on bolt Hole surface at the base of a shiver.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	<u>6355</u>	<u>.1679</u>
	2380	<u>3676</u>
	2280	<u>2885</u>
	2180	<u>2320</u>
	2080	<u>1848</u>
	1980	<u>1431</u>
	1880	<u>1063</u>
	1780	<u>0745</u>
	1680	<u>0521</u>
	1580	<u>0358</u>
	1480	<u>0250</u>
	1380	<u>0184</u>
One Life	1280	<u>0144</u>
	1200	<u>0120</u>
	1100	<u>0095</u>
	1000	<u>0077</u>
	900	<u>0059</u>
	800	<u>0046</u>
	700	<u>0036</u>
	600	<u>0028</u>
	500	<u>0021</u>
	400	<u>0015</u>
	300	<u>0011</u>
	200	<u>0008</u>

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	<u>a</u> <u>2c</u> <u>2e</u>
	2660	
Two Lives	2560	<u>0104</u> / <u>0281</u>
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: X QPB-29 B
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4999 1.5001 1.5004 1.4991 1.4994
AVERAGE THICKNESS: 3834 3842 3822 3833 3840 3833
AREA: .5751 R-Cal 17925(7668)
BASELINE STRESS: 31 KSI Cal.S 43%
MAX. LOAD: 17827 Apt. 7.13
CYCLES AT TERMINATION/FAILURE: 2 Lives/

@
STATIC LOAD A-17.82 K#
B-17.57 K#

origin lies at corner

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: X QPB-31 B
SPECTRUM: Bomber
TEST DATE: AB C D E F
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4997 1.4998 1.4991 1.5000 1.5004
AVERAGE THICKNESS: 3823 3847 3826 3842 3815 3814
AREA: .5733 R-Cal 18652(7957)
BASELINE STRESS: 31 KSI Cal.S 45%
MAX. LOAD: 17773 Apt. 7.11
CYCLES AT TERMINATION/FAILURE: 2 Lives/

@
STATIC LOAD A-17.02 K#
B-16.21 K#

origin lies on plate surface. Fatigue origin was due to fretting under tool marks. Both surfaces were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0218
	2480	.0202
	2380	.0183
	2280	.0165
	2180	.0146
	2080	.0128
	1980	.0108
	1880	.0094
	1780	.0080
	1680	.0070
	1580	.0060
	1480	.0050
	1380	.0042
One Life	1280	.0037
	1200	.0034
	1100	.0029
	1000	.0025
	900	.0021
	800	.0017
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0542
	2480	.0471
	2380	.0411
	2280	.0364
	2180	.0320
	2080	.0276
	1980	.0239
	1880	.0205
	1780	.0178
	1680	.0152
	1580	.0128
	1480	.0107
	1380	.0091
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-32B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
AVERAGE WIDTH: 1.5024 / 1.5023 / 1.5023 / 1.5031 / 1.5018
AVERAGE THICKNESS: .3843 / .3865 / .3812 / .3865 / .3836 / .3835
AREA: .5773 R-Cal 18478 (7891)
BASELINE STRESS: 33ksi Cal.S 41%
MAX. LOAD: 19051 Apt 7.62
CYCLES AT TERMINATION/FAILURE: 2 Lives / _____

①
STATIC LOAD A-16.40 K#
B-16.12 K#

↑
↓
origin lies on Plate surface near corner.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-33B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
AVERAGE WIDTH: 1.5008 / 1.5005 / 1.5012 / 1.5003 / 1.5005
AVERAGE THICKNESS: .3780 / .3798 / .3773 / .3792 / .3729 / .3770
AREA: .5674 R-Cal 18652 (7957)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 18723 Apt 7.49
CYCLES AT TERMINATION/FAILURE: 2 Lives / _____

②
STATIC LOAD B-10.28 K#
A-17.80 K#

↑
↓
origin lies on Bolt Hole surface near corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2580	.0820
	2480	.0714
	2380	.0592
	2280	.0507
	2180	.0442
	2080	.0391
	1980	.0345
	1880	.0298
	1780	.0262
	1680	.0231
	1580	.0203
	1480	.0172
	1380	.0152
One Life	1280	.0132
	1200	.0121
	1100	.0104
	1000	.0086
	900	.0069
	800	.0048
	700	.0037
	600	.0027
	500	.0020
	400	.0012
	300	.0006
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.2755
	2480	.2230
	2380	.1738
	2280	.1348
	2180	.1076
	2080	.0880
	1980	.0706
	1880	.0553
	1780	.0456
	1680	.0368
	1580	.0290
	1480	.0227
	1380	.0182
One Life	1280	.0156
	1200	.0137
	1100	.0105
	1000	.0072
	900	.0045
	800	.0033
	700	.0024
	600	.0019
	500	.0013
	400	.0009
	300	.0005
	200	.0003

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GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YQPB-34A

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.4993 1.4993 1.4993 1.501 1.4993

AVERAGE THICKNESS: 1.3805 1.3803 1.3788 1.3807 1.3807 1.3818

AREA: .5704 R-Cal 18652 (79.5)
Cal.S 45%

BASILINE STRESS: 31 Ksi Apt 7.07

MAX. LOAD: 17683

CYCLES AT TERMINATION/ 8 Lives/

②
STATIC LOAD A-15.02 K#
B-14.70 K#

Origin lies on Bolt Hole surface.

FATIGUE TEST DATA

SPECIMEN NUMBER: YQPB-36A

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5024 1.5026 1.5036 1.5049 1.5013

AVERAGE THICKNESS: 1.3833 1.3821 1.3820 1.3813 1.3852 1.3857

AREA: .5759 R-Cal 17925 (76.6)
Cal.S 43%

BASILINE STRESS: 31 Ksi Apt 7.14

MAX. LOAD: 17853

CYCLES AT TERMINATION/FAILURE: 31 Lives/

②
STATIC LOAD A-16.90 K#
B-17.96 K#

origin lies on Plate surface near corner. Both plate surface were milled
fatigue origin due to fretting.

FRACTOGRAPHIC DATA

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0844
	2480	.0682
	2380	.0523
	2280	.0393
	2180	.0304
	2080	.0230
	1980	.0174
	1880	.0145
	1780	.0118
	1680	.0095
	1580	.0077
	1480	.0063
	1380	.0050
One Life	1280	.0040
	1200	.0035
	1100	.0028
	1000	.0022
	900	.0018
	800	.0015
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT NUMBER	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0468
	2480	.0355
	2380	.0295
	2280	.0242
	2180	.0207
	2080	.0178
	1980	.0152
	1880	.0130
	1780	.0111
	1680	.0094
	1580	.0078
	1480	.0065
	1380	.0055
One Life	1280	.0044
	1200	.0037
	1100	.0027
	1000	.0020
	900	
	800	
	700	
	600	
	500	
	400	

BSNS. DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: XQPB-37B

SPECTRUM: Bomber

TEST DATE: ABCEI
TEST FRAME: 1 2 3 4 5

AVERAGE WIDTH: 1.4999 1.5011 1.5004 1.4985 1.4994

AVERAGE THICKNESS: .3878 .3816 .3825 .3842 .3817 .3814

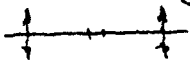
AREA: .5742 R-Cal 17925 (7668)
Cal.S 40%

BASLINE STRESS: 33ksi Apt 7.58

MAX. LOAD: 10949

CYCLES AT TERMINATION/FAILURE: 2 Lives/

②
STATIC LOAD A-16.60 K#
B-16.22 K#



ORIGIN LIES ON BOLT HOLE SURFACE.
BOTH SURFACES WERE MILLED.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0523
	2480	.0448
	2380	.0367
	2280	.0300
	2180	.0252
	2080	.0214
	1980	.0181
	1880	.0159
	1780	.0140
	1680	.0121
	1580	.0104
	1480	.0090
	1380	.0079
One Life	1280	.0071
	1200	.0066
	1100	.0058
	1000	.0050
	900	.0046
	800	.0038
	700	.0032
	600	.0027
	550	.0021
	400	.0016
	300	.0010
	200	.0005

AF4-4 CONTINUED FROM PREVIOUS PAGE

	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT II
3 Lives	60	24000		
	59	23600		
* →	58	23200	.39388	.01124
	57	22800	.38264	.07806
	56	22400	.30408	.03962
	55	22000	.26446	.03286
	54	21600	.23160	.02567
	53	21200	.20593	.02304
	52	20800	.18289	.01834
	51	20400	.16455	.01669
	50	20000	.14786	.01524
	49	19600	.13262	.01296
	48	19200	.11966	.01265
	47	18800	.10701	.01079
	46	18400	.09622	.00922
	45	18000	.08700	.00810
	44	17600	.07890	.00818
	43	17200	.07072	.00676
	42	16800	.06396	.00586
	41	16400	.05810	.00503

Spec-AF-4 FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SEE NEXT PAGE
FOR 41.2-200
2 Lives

SPECIMEN NUMBER: AF-4

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 (R14)

AVERAGE WIDTH: 1.503 1.503 1.503 1.503

AVERAGE THICKNESS: .377 .377 .377 .377

REA: 567

BASELINE STRESS: 34 KSI CAI = 93.9

AX. LOAD: 19261# A = 7.70

1 Life

CYCLES AT ~~TERMINATION~~/FAILURE:

. 2 Lives/_____

@ 2,182,992 L.P.C. = 22,806.4 FLT.-HRS

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT 1
40	16000	0.3307	0.0473
39	15600	0.4234	0.0469
38	15200	0.4370	0.0390
37	14800	0.3980	0.0354
36	14400	0.3626	0.0296
35	14000	0.3330	0.0292
34	13600	0.3038	0.0316
33	13200	0.2722	0.0262
32	12800	0.2460	0.0230
31	12400	0.2230	0.0230
30	12000	0.2000	0.0223
29	11600	0.1777	0.0207
28	11200	0.1570	0.0196
27	10800	0.1384	0.0169
26	10400	0.1215	0.0152
25	10000	0.1057	0.0162
24	9600	0.0895	0.0129
23	9200	0.0771	0.0112
22	8800	0.0677	0.0101
21	8400	0.0578	0.0087
20	8000	0.0490	0.0069
19	7600	0.0421	0.0058
18	7200	0.0363	0.0056
17	6800	0.0307	0.0037
16	6400	0.0270	0.0040
15	6000	0.0225	0.0040
14	5600	0.0185	0.0026
13	5200	0.0159	0.0024
12	4800	0.0135	0.0023
11	4400	0.0112	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: AF-1

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 (4) 5 R15

AVERAGE WIDTH: 1.5018

AVERAGE THICKNESS: .3701

REA: .556

BASELINE STRESS: 34 K CAI = 95.7

AX. LOAD: 18904 A = 7.56

1 Life

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD - 29.3 K#

BOLT HOLE WAS POLISHED

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.643	0.069
39	15600	0.574	0.052
38	15200	0.522	0.042
37	14800	0.482	0.042
36	14400	0.438	0.038
35	14000	0.400	0.037
34	13600	0.363	0.032
33	13200	0.331	0.031
32	12800	0.300	0.022
31	12400	0.278	0.026
30	12000	0.252	0.020
29	11600	0.232	0.022
28	11200	0.210	0.020
27	10800	0.190	0.019
26	10400	0.171	0.018
25	10000	0.153	0.018
24	9600	0.135	0.016
23	9200	0.117	0.012
22	8800	0.101	0.014
21	8400	0.089	0.010
20	8000	0.075	0.010
19	7600	0.065	0.009
18	7200	0.055	0.005
17	6800	0.046	0.007
16	6400	0.041	
15	6000	0.034	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

See next page for 4th and 5th Lives

SPECIMEN NUMBER: AF-5
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 (2) 3 4 5 (19)
 ERAGE WIDTH: 1.497 1.497 1.497 1.497
 ERAGE THICKNESS: 377 378 376 376
 EA. .565
 SELINE STRESS: 34KSI Cal = 970
 X. LOAD: 19205 A=7.68
 CLES AT TERMINATION/FAILURE:
 3 Lives/2,297,241
 STATIC LOAD - 3225 K#

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0044	.0004
39	15600	.0040	.0004
38	15200	.0036	.0004
37	14800	.0032	.0002
36	14400	.0030	.0004
35	14000	.0026	.0002
34	13600	.0024	.0003
33	13200	.0021	.0001
32	12800	.0020	.0001
31	12400	.0019	.0001
30	12000	.0018	.0001
29	11600	.0017	.0001
28	11200	.0016	.0001
27	10800	.0015	.0001
26	10400	.0014	.0001
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: AF-25
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 (89)
 VERAGE WIDTH: 1.5028
 VERAGE THICKNESS: .3749
 REA: .663
 ASELINE STRESS: 34K Cal = 907
 AX. LOAD: 19142 A=7.66
 YCLES AT TERMINATION/FAILURE:
 2 Lives/

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0264	.0016
39	15600	.0248	.0019
38	15200	.0229	.0015
37	14800	.0214	.0014
36	14400	.0200	.0017
35	14000	.0183	.0013
34	13600	.0120	.0014
33	13200	.0156	.0013
32	12800	.0143	.0013
31	12400	.0130	.0011
30	12000	.0119	.0010
29	11600	.0109	.0009
28	11200	.0100	.0010
27	10800	.0090	.0010
26	10400	.0080	.0009
25	10000	.0071	.0007
24	9600	.0064	.0005
23	9200	.0059	.0007
22	8800	.0052	.0004
21	8400	.0048	.0004
20	8000	.0044	.0004
19	7600	.0040	.0004
18	7200	.0036	.0004
17	6800	.0032	.0002
16	6400	.0030	.0004
15	6000	.0026	.0003
14	5600	.0024	.0003
13	5200	.0021	.0001
12	4800	.0020	.0001
11	4400	.0019	.0001
10	4000	.0018	.0001
9	3600	.0017	.0001
8	3200	.0016	.0001
7	2800	.0015	.0001
6	2400	.0014	
5	2000		
4	1600		
3	1200		
2	800		
1	400		

STATIC LOAD - 33.0 K#

Δ to 1.5889 Cal = 38849 came from (5) R16

kept flying

new Cal 97.3

AF-5⁻ CONTINUED FROM PREVIOUS PAGE

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
60	24000	.0264	.0016
59	23600	0248	0019
58	23200	0229	0015
57	22800	0214	0014
56	22400	0200	0017
55	22000	0183	0013
54	21600	0170	0014
53	21200	0156	0013
52	20800	0143	0013
51	20400	0130	0011
50	20000	0119	0010
49	19600	0109	0009
48	19200	0100	0010
47	18800	0090	0010
46	18400	0080	0009
45	18000	0071	0007
44	17600	0064	0005
43	17200	0059	0007
42	16800	0052	0004
41	16400	0048	0004

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

See next page for 2 Lives

SPECIMEN NUMBER: AF-6

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (1) 2 3 4 5 (28)

VERAGE WIDTH: 1.502 1.502 1.501 1.502

VERAGE THICKNESS: 377 376 378 378

REA: .567

ASELINE STRESS: 34 KSC *Cal: 91.3*

AX. LOAD: 19270 *St = 7.71*

YCLES AT ~~FAILURE~~/FAILURE: *

3 Lives/
@ 2,259.567 L.P.C = 23,606.41 FLT-HRS *

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0460	.0034
39	15600	.0426	.0036
38	15200	.0390	.0023
37	14800	.0367	.0028
36	14400	.0339	.0026
35	14000	.0313	.0023
34	13600	.0290	.0022
33	13200	.0268	.0020
32	12800	.0248	.0019
31	12400	.0224	.0021
30	12000	.0208	.0018
29	11600	.0190	.0016
28	11200	.0174	.0014
27	10800	.0160	.0016
26	10400	.0144	.0017
25	10000	.0127	
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

AF-6 Continued from Previous Page

FRACTOGRAPHIC DATA

	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT II
3 Lives	60	23600	.3105	.0012
*	59	23600	.3093	0567
	58	23200	2526	0341
	57	22800	2185	0245
	56	22400	1940	0223
	55	22000	1717	0189
	54	21600	1528	0147
	53	21200	1381	0128
	52	20800	1253	0121
	51	20400	1132	0092
	50	20000	1040	0095
	49	19600	0945	0085
	48	19200	0860	0070
	47	18800	0790	0050
	46	18400	0740	0066
	45	18000	0674	0056
	44	17600	0618	0059
	43	17200	0569	0036
	42	16800	0533	0039
	41	16400	0494	0034

(194)

2.3 TASK III
3.3.1 YWPF

FATIGUE TEST DATA

SPECIMEN NUMBER:

YWPF-1A2

2nd Bolt Hole
NOT PRIMARY

SPECTRUM: Fighter

TEST DATE:

TEST FRAME:

1 2 3 4 5 6

AGE WIDTH:

AGE THICKNESS:

LINE STRESS:

LOAD:

IS AT TERMINATION/

2 Lives/

@ 1,819,753 L.P.'s = 19,011.53 FLT-Hrs

ATIC LOAD A-

K#

B-

K#

ORIGIN LIES JUST IN FROM BOLT HOLE SURFACE
(~ 0.001 INCHES)

FATIGUE TEST DATA

SPECIMEN NUMBER:

YWPF-1B

SPECTRUM: Fighter

TEST DATE:

TEST FRAME:

1 2 3 4 5 15

ERAGE WIDTH:

1.5028 1.5042/1.5043/1.5044/1.5045

ERAGE THICKNESS:

.3760 .3771/3771/3771/3771/3771

EA:

.5651

2 CAL 1803V

SELIN STRESS:

34 KSI

cal 50.2 94.2%

X. LOAD:

19212.8

CLES AT TERMINATION/

3 Lives/2,297,241

@ 1,819,753 L.P.'s = 19,011.53

STATIC LOAD

A-15.30 K#

B-10.00 K#

ORIGIN LIES ON SURFACE THAT MATES WITH PLATE A
NEAR CORNER. MATING SURFACES WERE FILLED.

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.135	.0016
39	15600	0.119	.0015
38	15200	0.104	.0013
37	14800	0.091	.0012
36	14400	0.079	.0011
35	14000	0.068	.0008
34	13600	0.060	.0006
33	13200	0.054	.0006
32	12800	0.048	.0003
31	12400	0.045	.0004
30	12000	0.041	.0004
29	11600	0.037	.0004
28	11200	0.033	.0003
27	10800	0.030	.0004
26	10400	0.026	.0002
25	10000	0.024	.0005
24	9600	0.019	.0002
23	9200	0.017	
22	8800	0.014	
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.1273	.0105
39	15600	0.1188	.0100
38	15200	0.1088	.0097
37	14800	0.0991	.0096
36	14400	0.0905	.0074
35	14000	0.0831	.0068
34	13600	0.0763	.0063
33	13200	0.0700	.0056
32	12800	0.0644	.0067
31	12400	0.0577	.0064
30	12000	0.0513	.0057
29	11600	0.0456	.0054
28	11200	0.0402	.0032
27	10800	0.0370	.0035
26	10400	0.0335	.0036
25	10000	0.0299	.0034
24	9600	0.0265	.0032
23	9200	0.0233	.0028
22	8800	0.0205	.0024
21	8400	0.0181	.0021
20	8000	0.0160	.0021
19	7600	0.0139	.0019
18	7200	0.0120	.0018
17	6800	0.0102	
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Continued from previous page

FRACTOGRAPHIC DATA

YWPF-1A2 (2nd BOLT HOLE NOT PRIMARY)

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I'
	60	24000		
	59	23600		
	58	23200		
	57	22800		
	56	22400		
	55	22000		
	54	21600		
	53	21200		
	52	20800		
	51	20400		
	50	20000		
	49	19600		
	48	18800	.0343	.0052
	47	18800	.0291	.0026
	46	18400	.0265	.0024
	45	18000	.0241	.0020
	44	17600	.0221	.0024
	43	17200	.0197	.0022
	42	16800	.0175	.0022
	41	16400	.0153	.0018

FRACTOGRAPHIC DATA

YWPF-1B

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I'
	60	24000		
	59	23600		
	58	23200		
	57	22800		
	56	22400		
	55	22000		
	54	21600		
	53	21200		
	52	20800		
	51	20400		
	50	20000		
	49	19600		
	48	18800	.2527	.0134
	47	18800	.2393	.0214
	46	18400	.2179	.0182
	45	18000	.1996	.0180
	44	17600	.1816	.0145
	43	17200	.1671	.0133
	42	16800	.1538	.0128
	41	16400	.1410	.0117

FRACIOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-2B
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 16
 ERAGE WIDTH: 1.4987 1.4972 1.4968 1.5000 1.5007
 ERAGE THICKNESS: .3791 .3790 .3752 .3796 .3811
 EA: .5682 R CAL. 18652
 SELINE STRESS: 34 KSI CAL. S. 945
 X. LOAD: 19317.0 Apot 7.73
 CLES AT TERMINATION/_____

3 Lives/_____

@ 1,817,861 L.P.'s = 18,991.77

STATIC LOAD A-13.78 K#

B-11.82 K#

ORIGIN LIES AT THE CORNER. MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0817	.0066
39	15600	.0751	.0066
38	15200	.0685	.0065
37	14800	.0620	.0060
36	14400	.0560	.0037
35	14000	.0523	.0053
34	13600	.0470	.0044
33	13200	.0426	.0041
32	12800	.0385	.0040
31	12400	.0345	.0032
30	12000	.0313	.0035
29	11600	.0278	.0026
28	11200	.0252	.0024
27	10800	.0228	.0019
26	10400	.0209	.0016
25	10000	.0193	.0018
24	9600	.0175	.0018
23	9200	.0157	.0016
22	8800	.0141	.0014
21	8400	.0127	.0019
20	8000	.0108	.0009
19	7600	.0099	.0009
18	7200	.0090	.0006
17	6800	.0084	.0007
16	6400	.0077	.0008
15	6000	.0069	.0005
14	5600	.0064	.0008
13	5200	.0056	.0007
12	4800	.0049	.0006
11	4400	.0043	.0005
10	4000	.0038	.0006
9	3600	.0032	.0005
8	3200	.0027	.0005
7	2800	.0022	.0004
6	2400	.0018	.0004
5	2000	.0014	
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-3B
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 6 17
 ERAGE WIDTH: 1.5000 1.5004 1.5001 1.4996 1.5000
 ERAGE THICKNESS: .3761 .3753 .3754 .3753 .3772 .3772
 EA: .5641 R CAL. 18418
 SELINE STRESS: 34 KSI CAL. S. .96.3
 X. LOAD: 19180.4 Apot 7.67
 CLES AT TERMINATION/_____

3 Lives/_____

@ 1,816,227 L.P.'s = 18,974.70

STATIC LOAD A-16.32 K#

B-16.83 K#

ORIGIN LIES ON CHAMFERED CORNER SURFACE

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0268	.0046
39	15600	.0222	.0028
38	15200	.0194	.0024
37	14800	.0170	.0015
36	14400	.0155	.0015
35	14000	.0140	.0017
34	13600	.0123	.0016
33	13200	.0107	.0010
32	12800	.0097	.0011
31	12400	.0086	.0007
30	12000	.0079	.0008
29	11600	.0071	.0009
28	11200	.0062	.0007
27	10800	.0055	.0005
26	10400	.0050	.0008
25	10000	.0042	.0005
24	9600	.0037	.0005
23	9200	.0032	.0007
22	8800	.0025	.0005
21	8400	.0020	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Continued from previous page

FRACTOGRAPHIC DATA

YWPF-2B

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
60	24000		
59	23600		
58	23200		
57	22800		
56	22400		
55	22000		
54	21600		
53	21200		
52	20800		
51	20400		
50	20000		
49	19600		
→ 48	19200	.1759	.0102
47	18800	1657	0152
46	18400	1505	0150
45	18000	1355	0137
44	17600	1218	0135
43	17200	1083	0103
42	16800	0930	0086
41	16400	0894	0077

FRACTOGRAPHIC DATA

YWPF-3B

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
60	24000		
59	23600		
58	23200		
57	22800		
56	22400		
55	22000		
54	21600		
53	21200		
52	20800		
51	20400		
50	20000		
49	19600		
→ 48	19200	.0630	.0027
47	18800	0603	0053
46	18400	0550	0054
45	18000	0496	0050
44	17600	0446	0043
43	17200	0403	0039
42	16800	0364	0052
41	16400	0312	0044

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

Delam. *See next page*

SPECIMEN NUMBER: YWPF-4A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 88

BRIDGE WIDTH: 1.515 1.5010 1.5008 1.5027

BRIDGE THICKNESS: .3791 .3787 .3759 .3778 .3817 .383

EA: .5758 REAL 18752

SELINE STRESS: 34 KSI CAL SWING 95.8

X. LOAD: 19577.2 *pot 783

CLES AT ~~TERMINATION~~/FAILURE: *

3 Lives/ _____

① 1,802,871 L.P.S = 18,835.16 FLT-HRS *

ORIGIN LIES ON CHAMFERED CORNER SURFACE

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1243	.0169
39	15600	.1074	.0143
38	15200	.0931	.0126
37	14800	.0805	.0105
36	14400	.0700	.0085
35	14000	.0615	.0087
34	13600	.0528	.0078
33	13200	.0450	.0053
32	12800	.0397	.0049
31	12400	.0348	.0046
30	12000	.0302	.0040
29	11600	.0262	.0035
28	11200	.0227	.0024
27	10800	.0203	.0024
26	10400	.0179	.0026
25	10000	.0153	.0024
24	9600	.0129	.0022
23	9200	.0107	.0021
22	8800	.0086	.0012
21	8400	.0074	.0014
20	8000	.0060	.0011
19	7600	.0049	.0009
18	7200	.0040	.0008
17	6800	.0032	.0007
16	6400	.0025	.0004
15	6000	.0021	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

See next page

SPECIMEN NUMBER: YWPF-5B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 89

BRIDGE WIDTH: 1.4975 1.4989 1.4938 1.5004 1.5008

BRIDGE THICKNESS: .37766 .3793 .3787 .3794 .3794 .3794

EA: .5655 REAL 18629

SELINE STRESS: 34 KSI CAL SWING 96.9

X. LOAD: 19228.2 *pot 770

CLES AT TERMINATION/FAILURE: *

3 Lives/ _____

① 1,823,882 L.P.S = 19,054.67

STATIC LOAD A - 15.48 K#
B - 13.88 K#

ORIGIN LIES ON SURFACE WHICH MATES WITH PLATE "A" NEAR THE CORNER. MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0978	.0066
39	15600	.0912	.0053
38	15200	.0859	.0046
37	14800	.0813	.0050
36	14400	.0763	.0049
35	14000	.0714	.0053
34	13600	.0661	.0048
33	13200	.0613	.0039
32	12800	.0574	.0041
31	12400	.0533	.0040
30	12000	.0493	.0040
29	11600	.0453	.0043
28	11200	.0410	.0043
27	10800	.0367	.0029
26	10400	.0338	.0035
25	10000	.0303	.0028
24	9600	.0275	.0025
23	9200	.0250	.0026
22	8800	.0224	.0026
21	8400	.0198	.0024
20	8000	.0174	.0019
19	7600	.0155	.0018
18	7200	.0137	.0017
17	6800	.0120	.0018
16	6400	.0102	.0015
15	6000	.0087	.0007
14	5600	.0080	.0008
13	5200	.0072	.0009
12	4800	.0063	.0008
11	4400	.0055	.0006
10	4000	.0049	.0006
9	3600	.0043	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Continued from previous page

FRACTOGRAPHIC DATA

YWPF-4A

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
	60	24000		
	59	23600		
	58	23200		
	57	22800		
	56	22400		
	55	22000		
	54	21600		
	53	21200		
	52	20800		
	51	20400		
	50	20000		
	49	19600		
*	48	19200	.3540	.0085
	47	18800	.3455	.0575
	46	18400	.2880	.0420
	45	18000	.2460	.0286
	44	17600	.2174	.0311
	43	17200	.1863	.0228
	42	16800	.1635	.0213
	41	16400	.1422	.0179

FRACTOGRAPHIC DATA

YWIF-5B

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
	60	24000		
	59	23600		
	58	23200		
	57	22800		
	56	22400		
	55	22000		
	54	21600		
	53	21200		
	52	20800		
	51	20400		
	50	20000		
	49	19600		
*	48	19200	.1677	.0070
	47	18800	.1607	.0106
	46	18400	.1501	.0105
	45	18000	.1396	.0101
	44	17600	.1295	.0092
	43	17200	.1203	.0086
	42	16800	.1117	.0065
	41	16400	.1052	.0074

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-6B
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 ③ 4 5 6 90
 ERAGE WIDTH: 1.5016 1.5012 1.5008 1.5019 1.5025
 ERAGE THICKNESS: .37784 .3785 .3781 .3782 .3742 .3712
 EA: .56740 R.CAL. 18982
 SELINE STRESS: 34 KSI. CAL. & 98.4
 X. LOAD: 19290.4 APOT 7.72
 CLES AT TERMINATION/FAILURE: 3 Lives/

@ 1,824,260 L.P.s = 19,058.62 FLT-Hrs.
 STATIC LOAD A-15.84 K#
 B-12.00 K#

ORIGIN LIES ON SURFACE (NEAR CORNER) THAT
 MATES WITH PLATE "A". MATING SURFACES WERE
 MILLED.

2 Lives

See next page

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1595	.0120
39	15600	.1475	.0107
38	15200	.1368	.0114
37	14800	.1254	.0111
36	14400	.1143	.0104
35	14000	.1039	.0099
34	13600	.0940	.0115
33	13200	.0825	.0065
32	12800	.0769	.0069
31	12400	.0691	.0064
30	12000	.0627	.0048
29	11600	.0579	.0057
28	11200	.0522	.0053
27	10800	.0469	.0046
26	10400	.0423	.0046
25	10000	.0377	.0040
24	9600	.0337	.0038
23	9200	.0299	.0048
22	8800	.0251	.0032
21	8400	.0219	.0036
20	8000	.0183	.0035
19	7600	.0148	.0037
18	7200	.0121	.0013
17	6800	.0108	.0016
16	6400	.0092	.0013
15	6000	.0079	.0013
14	5600	.0066	.0011
13	5200	.0055	.0005
12	4800	.0050	.0011
11	4400	.0039	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-7A
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 4 5 6 90
 ERAGE WIDTH: 1.5020 1.5014 1.5023 1.5022 1.5019
 ERAGE THICKNESS: .3765 .3753 .3742 .3753 .3788 .3791
 EA: .5656 R.C. 18982
 SELINE STRESS: 34 KSI. C.S. 98.7
 X. LOAD: 19229.1 AP 7.70
 CLES AT TERMINATION/FAILURE: 2 Lives/1531444

③
 STATIC LOAD A-10.13 K#
 B-16.68 K#

ORIGIN LIES NEAR BELT HOLE/CHAMFER
 SURFACE ON THE CHAMFER.

2 Lives

1 Life

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.2756	.0362
39	15600	.2394	.0305
38	15200	.2089	.0288
37	14800	.1801	.0214
36	14400	.1587	.0203
35	14000	.1384	.0186
34	13600	.1198	.0159
33	13200	.1039	.0142
32	12800	.0897	.0112
31	12400	.0785	.0095
30	12000	.0690	.0081
29	11600	.0609	.0081
28	11200	.0528	.0066
27	10800	.0462	.0054
26	10400	.0400	.0051
25	10000	.0357	.0049
24	9600	.0308	.0043
23	9200	.0265	.0037
22	8800	.0228	.0042
21	8400	.0186	.0033
20	8000	.0153	.0033
19	7600	.0120	.0025
18	7200	.0095	.0022
17	6800	.0073	.0016
16	6400	.0057	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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Continued from previous page

FRACTOGRAPHIC DATA

YWPF-6B

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
60	24000		
59	23600		
58	23200		
57	22800		
56	22400		
55	22000		
54	21600		
53	21200		
52	20800		
51	20400		
50	20000		
49	19600		
→ 48	19200	.2840	.0130
47	18800	.2710	0194
46	18400	.2516	0166
45	18000	.2350	0165
44	17600	.2185	0166
43	17200	.2019	0149
42	16800	.1870	0132
41	16400	.1738	0143

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-7A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5042 1.5041 1.5033 1.5048 1.5047

AVERAGE THICKNESS: .3831 .3820 .3804 .3819 .3853 .3860

AREA: .5763 RCAL 18982

BASELINE STRESS: 34 KSI CAL S. 97%

MAX. LOAD: 10594 A. POT. 784

CYCLES AT TERMINATION/_____:

2 Lives/_____

STATIC LOAD A-17.70 K#
B-18.04 K#



FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-8B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: D

AVERAGE WIDTH: 1.4999 1.5006 1.5002 1.4999 1.4998

AVERAGE THICKNESS: .3714 .3772 .3758 .3759 .3813 .3788

AREA: .5570 RCAL 18478

BASELINE STRESS: 32 CAL S. 98%

MAX. LOAD: 8939 A. POT. 758

CYCLES AT TERMINATION/_____:

2 Lives/_____

STATIC LOAD A-16.20 K#
B-16.16 K#



ORIGIN LIES 0.0004 IN. BELOW HOLE SURFACE

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0428	.0049
39	15600	.0379	.0030
38	15200	.0349	.0022
37	14800	.0327	.0018
36	14400	.0309	.0014
35	14000	.0285	.0025
34	13600	.0260	.0024
33	13200	.0236	.0022
32	12800	.0214	.0023
31	12400	.0193	.0019
30	12000	.0170	.0017
29	11600	.0153	.0014
28	11200	.0139	.0014
27	10800	.0125	.0017
26	10400	.0108	.0014
25	10000	.0094	.0013
24	9600	.0083	.0011
23	9200	.0072	.0009
22	8800	.0063	.0012
21	8400	.0051	.0003
20	8000	.0047	.0005
19	7600	.0042	.0004
18	7200	.0038	.0005
17	6800	.0033	.0003
16	6400	.0030	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0434	.0077
39	15600	.0357	.0059
38	15200	.0293	.0058
37	14800	.0240	.0042
36	14400	.0198	.0024
35	14000	.0174	.0018
34	13600	.0156	.0018
33	13200	.0138	.0014
32	12800	.0124	.0014
31	12400	.0110	.0012
30	12000	.0098	.0015
29	11600	.0085	.0012
28	11200	.0073	.0008
27	10800	.0065	.0007
26	10400	.0056	.0007
25	10000	.0049	.0008
24	9600	.0041	.0007
23	9200	.0034	.0007
22	8800	.0027	.0004
21	8400	.0023	.0004
20	8000	.0019	.0003
19	7600	.0016	.0002
18	7200	.0014	.0002
17	6800	.0012	.0001
16	6400	.0011	.0001
15	6000	.0010	.0001
14	5600	.0009	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-9B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5001 1.5005 1.4999 1.5006 1.5005

AVERAGE THICKNESS: .3798 .3793 .3774 .3796 .3821 .3825

AREA: .5698 REAL 18652

BASILINE STRESS 34ksi CALS 96%

MAX. LOAD: 9373 A.POT. 7.5

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-1810 K#
B-1594 K#

TWO PRIMARIES:
ORIGINS LIE ON SURFACE OF PLATE "B"
SECONDARY ORIGIN LIES ON HOLE SURFACE.

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-10B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.4997 1.5005 1.5002 1.4999 1.4992

AVERAGE THICKNESS: .3735 .3726 .3725 .3721 .3746 .3755

AREA: .5601 REAL 18982

BASILINE STRESS: 34ksi CALS 65%

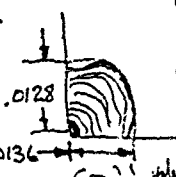
MAX. LOAD: 19043 A.POT. 7.6

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD A-17.22 K#
B-17.60 K#

ORIGIN LIES ON SURFACE OF PLATE "B"
NEAR CORNER. ALL 40BLKS (16000 FLT-HRS)
ARE PRESENT.



FRAC TOGRAPHIC DATA

BLK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0373	.0036
39	15600	.0337	.0031
38	15200	.0306	.0036
37	14800	.0270	.0032
36	14400	.0238	.0035
35	14000	.0203	.0027
34	13600	.0176	.0029
33	13200	.0147	.0023
32	12800	.0122	.0022
31	12400	.0100	.0019
30	12000	.0081	.0015
29	11600	.0066	.0012
28	11200	.0054	.0009
27	10800	.0045	.0006
26	10400	.0039	.0007
25	10000	.0032	.0005
24	9600	.0027	.0003
23	9200	.0024	
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

BLK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-11B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 R 15

ERAGE WIDTH: 1.5023 1.508 1.508 1.502 1.5025

ERAGE THICKNESS: .3803 .3817 .3794 .3810 .3811 .3813

EA: .5722 R.C. 18478

SELIN STRESS: 34KSI C.S. 95.

X. LOAD: 19455.7 AP 7.78

CLES AT TERMINATION/FAILURE:

2 Lives/1531494

②

STATIC LOAD A-16.93 K#

B-15.78 K#

ORIGINS LIE ON BOLT HOLE SURFACE

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-12

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 R 16

ERAGE WIDTH: 1.5001 1.4996 1.4996 1.5005 1.5007

ERAGE THICKNESS: .3747 .3740 .3726 .3734 .3767 .3770

EA: .5621 R.C. 18652

SELIN STRESS: 34KSI C.S. 98.0

X. LOAD: 19113.0 AP 7.65

CLES AT TERMINATION/FAILURE:

2 Lives/1531494

②

STATIC LOAD A-14.64 K#

B-17.64 K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0749	.0059
39	15600	.0690	.0041
38	15200	.0649	.0043
37	14800	.0606	.0039
36	14400	.0567	.0036
35	14000	.0531	.0044
34	13600	.0487	.0034
33	13200	.0453	.0037
32	12800	.0416	.0033
31	12400	.0383	.0027
30	12000	.0356	.0030
29	11600	.0326	.0033
28	11200	.0293	.0030
27	10800	.0263	.0027
26	10400	.0236	.0026
25	10000	.0210	.0029
24	9600	.0181	.0015
23	9200	.0163	.0023
22	8800	.0140	.0023
21	8400	.0117	.0022
20	8000	.0095	.0019
19	7600	.0076	.0014
18	7200	.0062	.0012
17	6800	.0050	.0009
16	6400	.0041	.0008
15	6000	.0033	.0005
14	5600	.0028	.0004
13	5200	.0024	.0002
12	4800	.0022	.0002
11	4400	.0020	.0003
10	4000	.0017	.0003
9	3600	.0014	.0002
8	3200	.0012	.0002
7	2800	.0010	.0001
6	2400	.0009	.0002
5	2000	.0007	.0002
4	1600	.0005	
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1029	.0072
39	15600	.0957	.0070
38	15200	.0887	.0068
37	14800	.0819	.0072
36	14400	.0747	.0073
35	14000	.0674	.0072
34	13600	.0602	.0070
33	13200	.0532	.0067
32	12800	.0465	.0085
31	12400	.0380	.0050
30	12000	.0330	.0074
29	11600	.0256	.0057
28	11200	.0199	.0058
27	10800	.0141	.0046
26	10400	.0095	
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YW PF-13A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 ⑥

ERAGE WIDTH: 1.5030 1.5040 1.5030 1.5011 1.5028

ERAGE THICKNESS: .3821 .3824 .3814 .3825 .3818 .3822

EA: .5742 R.CAL 18752

SELIN STRESS: 34K CS 96%

X. LOAD: 19524.0 AP 78.1 1 Life

CLES AT TERMINATION/

2 Lives/

②

STATIC LOAD A-14.07 K#
B-15.88 K#

ORIGIN LIES ON THE BOLT HOLE SURFACE

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1345	.0133
39	15600	.1212	.0114
38	15200	.1098	.0093
37	14800	.1005	.0107
36	14400	.0898	.0076
35	14000	.0822	.0078
34	13600	.0744	.0086
33	13200	.0658	.0056
32	12800	.0602	.0053
31	12400	.0549	.0049
30	12000	.0500	.0049
29	11600	.0451	.0047
28	11200	.0404	.0039
27	10800	.0365	.0041
26	10400	.0324	.0034
25	10000	.0290	.0036
24	9600	.0254	.0041
23	9200	.0213	.0030
22	8800	.0183	.0032
21	8400	.0151	.0021
20	8000	.0130	.0022
19	7600	.0108	.0020
18	7200	.0088	.0014
17	6800	.0074	.0012
16	6400	.0062	.0010
15	6000	.0052	.0011
14	5600	.0041	.0011
13	5200	.0030	.0007
12	4800	.0023	.0004
11	4400	.0019	.0003
10	4000	.0016	.0004
9	3600	.0012	.0004
8	3200	.0008	.0003
7	2800	.0005	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YW PF-14A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 ⑥

ERAGE WIDTH: 1.5016 1.5012 1.5016 1.5019 1.5019

ERAGE THICKNESS: .3810 .3816 .3795 .3812 .3816 .3813

EA: .5722 R.CAL 18627

SELIN STRESS: 34K CAL 95.7

X. LOAD: 19453.8 A.P 778 1 Life

CLES AT TERMINATION/

2 Lives/

②

STATIC LOAD A-5.80 K#
B-17.58 K#

ORIGIN LIES ON RADIUS OF CORNER
FROM SLIVER.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.4701	.1116
39	15600	.3585	.0542
38	15200	.3043	.0335
37	14800	.2708	.0260
36	14400	.2438	.0233
35	14000	.2215	.0223
34	13600	.1992	.0185
33	13200	.1807	.0160
32	12800	.1647	.0151
31	12400	.1496	.0125
30	12000	.1371	.0126
29	11600	.1245	.0112
28	11200	.1133	.0108
27	10800	.1025	.0077
26	10400	.0948	.0095
25	10000	.0853	.0081
24	9600	.0772	.0074
23	9200	.0698	.0075
22	8800	.0623	.0061
21	8400	.0562	.0062
20	8000	.0500	.0046
19	7600	.0454	.0070
18	7200	.0384	.0073
17	6800	.0311	.0053
16	6400	.0258	.0048
15	6000	.0210	.0037
14	5600	.0179	.0038
13	5200	.0141	.0039
12	4800	.0102	.0024
11	4400	.0078	.0016
10	4000	.0062	.0016
9	3600	.0046	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-15B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 17

ERAGE WIDTH: 1.5013 1.5014 1.5002 1.5016 1.5020

ERAGE THICKNESS: .3809 .3810 .3798 .3811 .3817 .3812

EA: 5720 R.C. 16034

SELIN STRESS: 34 KSI C-503.

X. LOAD: 19445.8 1 Life

ES AT TERMINATION/FAILURE:

2 Lives/ 1531494

2

STATIC LOAD A- 1792 K#
B- 1660 K#

ORIGIN LIES ON PLATE SURFACE, WHICH
MATES WITH PLATE "A", NEAR THE
CHAMFERED CORNER.

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0395	.0025
39	15600	.0370	.0028
38	15200	.0342	.0022
37	14800	.0320	.0037
36	14400	.0283	.0025
35	14000	.0258	.0026
34	13600	.0232	.0032
33	13200	.0200	.0031
32	12800	.0169	.0027
31	12400	.0142	.0021
30	12000	.0121	.0024
29	11600	.0097	.0022
28	11200	.0075	.0016
27	10800	.0059	.0015
26	10400	.0044	.0011
25	10000	.0033	.0005
24	9600	.0028	.0004
23	9200	.0024	.0002
22	8800	.0022	.0003
21	8400	.0019	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-16A Primary Bolt Hole
NOT the Primary

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AGE WIDTH: See Primary for Data

AGE THICKNESS: _____

EA: _____ R.CAL. _____
CAL-5 _____

ELINE STRESS: _____ ApOT _____

LOAD: _____ 1 Life

ES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD A- K#
B- K#

ORIGIN LIES ON RADIIWS OF CORNER

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0081	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

207

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-17B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (15)

ERAGE WIDTH: 1.5010 1.5002 1.4998 1.5020 1.5020

ERAGE THICKNESS: .3854 .3883 .3845 .3872 .3836 .3832

EA: .5784 R CAL 18478

SELIN STRESS: 34K C.S. 93.9

X. LOAD: 19666.5 A.J. 786

CLES AT TERMINATION/_____ 1 Life

2 Lives/_____

②
STATIC LOAD A-17.68 K#
B-17.94 K#

ORIGIN LIES ON CHAMFERED CORNER SURFACE
MATING SURFACES WERE MILLED.

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-18A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 (16)

ERAGE WIDTH: 1.5020 1.5007 1.5011 1.5032 1.5029

ERAGE THICKNESS: .3795 .3820 .3775 .3816 .3783 .3779

EA: .5700 R CAL 18652

SELIN STRESS: 34K CAL. 96.2

LOAD: 19380.3 A-J 775

CLES AT TERMINATION/_____ 1 Life

2 Lives/_____

②
STATIC LOAD A-11.36 K#
B-13.74 K#

ORIGIN LIES ON MATING SURFACE NEAR
RADIUS CORNER. ORIGIN WAS DUE TO
FRETTING 212

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0248	.0020
39	15600	.0228	.0023
38	15200	.0205	.0015
37	14800	.0190	.0215
36	14400	.0175	.0015
35	14000	.0160	.0017
34	13600	.0143	.0012
33	13200	.0131	.0011
32	12800	.0120	.0005
31	12400	.0115	.0008
30	12000	.0107	.0007
29	11600	.0100	.0009
28	11200	.0091	.0009
27	10800	.0082	.0006
26	10400	.0076	
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.3258	.0320
39	15600	.2938	.0262
38	15200	.2676	.0226
37	14800	.2450	.0222
36	14400	.2228	.0204
35	14000	.2024	.0214
34	13600	.1810	.0187
33	13200	.1623	.0191
32	12800	.1437	.0141
31	12400	.1291	.0166
30	12000	.1125	.0143
29	11600	.0982	.0134
28	11200	.0848	.0113
27	10800	.0735	.0095
26	10400	.0640	.0082
25	10000	.0558	.0076
24	9600	.0482	.0065
23	9200	.0417	.0062
22	8800	.0355	.0055
21	8400	.0300	.0043
20	8000	.0257	.0041
19	7600	.0216	.0033
18	7200	.0183	.0035
17	6800	.0148	.0038
16	6400	.0110	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-19B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 7

ERAGE WIDTH: 1.5009 1.5007 1.5008 1.5012 1.5009

ERAGE THICKNESS: .3781 .3784 .3774 .3776 .3784 .3778

EA: .5675

R CAL 18084

ELINE STRESS: 24K

CAL S. 93.7

X. LOAD: 19295.7

AP 772

LES AT TERMINATION

2 Lives/

2

STATIC LOAD A-17.59 K#

B-15.98 K#



ORIGIN LIES ON CHAMFER CORNER SURFACE.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0680	.0061
39	15600	.0619	.0047
38	15200	.0572	.0054
37	14800	.0518	.0055
36	14400	.0463	.0032
35	14000	.0431	.0037
34	13600	.0394	.0025
33	13200	.0369	.0035
32	12800	.0334	.0028
31	12400	.0306	.0022
30	12000	.0284	.0027
29	11600	.0257	.0029
28	11200	.0228	.0025
27	10800	.0203	.0024
26	10400	.0179	.0026
25	10000	.0153	
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-20B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AGE WIDTH: 1.5003 1.5002 1.5008 1.5002 1.4999

AGE THICKNESS: .3770 .3798 .3751 .3783 .3763 .3752

1: .3656

R-CAL. 17752

ELINE STRESS: 34ksi

CAL-S 928

LOAD: 19231.8

APOT 770

ES AT - /FAILURE: *

2 Lives/

@ 1,496,570 L.P.s = 15,635.14 FLT. Hrs.*

TATIC LOAD A- K#

B- K#



ORIGIN LIES ON PLATE B SURFACE.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40		.2842	.0078
39	15600	.2764	.0532
38	15200	.2232	.0367
37	14800	.1845	.0220
36	14400	.1595	.0208
35	14000	.1387	.0163
34	13600	.1224	.0130
33	13200	.1094	.0094
32	12800	.1000	.0089
31	12400	.0911	.0079
30	12000	.0832	.0054
29	11600	.0778	.0055
28	11200	.0723	.0050
27	10800	.0673	.0044
26	10400	.0629	.0038
25	10000	.0591	.0042
24	9600	.0549	.0029
23	9200	.0520	.0032
22	8800	.0488	.0032
21	8400	.0456	.0031
20	8000	.0425	.0028
19	7600	.0397	.0029
18	7200	.0368	.0030
17	6800	.0338	.0026
16	6400	.0312	.0026
15	6000	.0286	.0022
14	5600	.0264	.0025
13	5200	.0239	.0024
12	4800	.0215	.0024
11	4400	.0191	.0020
10	4000	.0171	.0020
9	3600	.0151	.0018
8	3200	.0133	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-21B

SPECTRUM: Fighter

TEST DATE: (29) *

TEST FRAME: 1 (2) 3 4 5 6

RAGE WIDTH: 1.4939 1.4939 1.5013 1.4998 1.4987

RAGE THICKNESS: .3806 .3804 .3804 .3802 .3823 .3813

A: .5709 R CAL 15627

ELINE STRESS: 34 KSI C.S. 96%

. LOAD: 19411.2 AP 7.76

LES AT TERMINATION/FAILURE: * 1 Life

2 Lives/

@ 1,225,192 L.P.'s = 12,799.97 FLT-HRS *

TATIC LOAD A- K#

B- K#

ORIGIN LIES ON PLATE SURFACE NEAR CORNER DUE TO TOOL MARKS (RELAX TOLERANCE)

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800	.4841	.1436
31	12400	.3405	.0621
30	12000	.2784	.0377
29	11600	.2407	.0344
28	11200	.2063	.0262
27	10800	.1801	.0214
26	10400	.1587	.0173
25	10000	.1414	.0154
24	9600	.1260	.0130
23	9200	.1130	.0128
22	8800	.1002	.0106
21	8400	.0896	.0088
20	8000	.0808	.0082
19	7600	.0726	.0075
18	7200	.0651	.0081
17	6800	.0570	.0067
16	6400	.0503	.0064
15	6000	.0439	.0055
14	5600	.0384	.0072
13	5200	.0312	.0051
12	4800	.0261	.0056
11	4400	.0205	.0057
10	4000	.0148	.0053
9	3600	.0095	.0030
8	3200	.0065	.0016
7	2800	.0049	.0019
6	2400	.0030	.0010
5	2000	.0020	.0009
4	1600	.0011	.0005
3	1200	.0006	.0002
2	800	.0004	
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-22B

SPECTRUM: Fighter

TEST DATE: (90) *

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.5045 1.5043 1.5045 1.5044 1.5045

RAGE THICKNESS: .3821 .3827 .3808 .3826 .3818 .3826

A: .5749 R CAL 10302

ELINE STRESS: 34 KSI C.S. 97%

. LOAD: 19545.6 AP 7.62

LES AT TERMINATION TERMINATION 1 Life

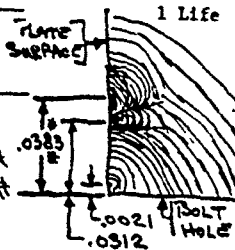
2 Lives/

TATIC LOAD A-17.89 K#

B-16.02 K#

ORIGINS LIE ON PLATE "B" SURFACE FATIGUE INITIATION WAS FROM MILL TOOL MARKS. DUE TO RELAX TOLERANCE!

Blk #	FLIGHT HRS.	CRACK LENGTH IN*	INCREMENT IN.
40	16000	.0957	.0574
39	15600	.0880	.0497
38	15200	.0801	.0418
37	14800	.0748	.0365
36	14400	.0703	.0320
35	14000	.0660	.0277
34	13600	.0616	.0233
33	13200	.0581	.0193
32	12800	.0559	.0176
31	12400	.0540	.0157
30	12000	.0514	.0131
29	11600	.0500	.0117
28	11200	.0489	.0106
27	10800	.0477	.0094
26	10400	.0459	.0071
25	10000	.0442	.0059
24	9600	.0437	.0054
23	9200	.0433	.0050
22	8800	.0428	.0045
21	8400	.0421	.0038
20	8000	.0414	.0031
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		



FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-23

SPECTRUM: Fighter Lubricate with Tungsten disulfide

TEST DATE: _____

TEST FRAME: 1 2 ③ 4 5 6 ⑨

CRACK WIDTH: 1.5004 (Specimen was measured before being fractured, see below)

CRACK THICKNESS: .3762

EA: .5645

SELINE STRESS: 34 KSI R.CAL 18982 C.S. 989

I. LOAD: 1913.0 AP 767 1 Life

CRACKS AT TERMINATION: _____
3 Lives/_____

③
STATIC LOAD A-15.96 K#
B-13.64 K#

ORIGIN LIES AT CORNER (CHAMFERED)
MATING SURFACES WERE MILLED.
TUNGSTEN DISULFIDE LUBRICANT HAS
DESTROYED THE FRACTURE ORIGIN AREA.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.14025	.01842
39	15600	.12183	.01401
38	15200	.10782	.01149
37	14800	.09633	.00970
36	14400	.08663	.00963
35	14000	.07700	.00842
34	13600	.06858	.00727
33	13200	.06131	.00564
32	12800	.05567	.00563
31	12400	.05004	.00501
30	12000	.04503	.00435
29	11600	.04068	.00328
28	11200	.03740	.00294
27	10800	.03446	.00226
26	10400	.03020	.00243
25	10000	.02677	.00296
24	9600	.02381	.00209
23	9200	.02172	.00274
22	8800	.01898	.00211
21	8400	.01687	.00229
20	8000	.01358	.00146
19	7600	.01162	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-25B

SPECTRUM: Fighter

TEST DATE: _____ ①5

TEST FRAME: 1 2 3 ④ 5 6

CRACK WIDTH: 1.5011 1.5012 1.5012 1.5011 1.5008

CRACK THICKNESS: .3808 .3821 .3798 .3806 .3812 .3804

A: .5716 R.CAL 18478

SELINE STRESS: 34 KSI C.S. 9=9

I. LOAD: 19436.1 AP 777 1 Life

CRACKS AT TERMINATION/FAILURE: _____
2 Lives/_____

STATIC LOAD A-17.20 K#
B-15.24 K#

ORIGIN LIES ON BOLT HOLE SURFACE

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0690	.0066
39	15600	.0624	.0069
38	15200	.0555	.0061
37	14800	.0494	.0056
36	14400	.0438	.0053
35	14000	.0385	.0040
34	13600	.0345	.0033
33	13200	.0312	.0042
32	12800	.0270	.0028
31	12400	.0242	.0031
30	12000	.0211	.0028
29	11600	.0183	.0021
28	11200	.0162	.0019
27	10800	.0143	.0013
26	10400	.0130	.0010
25	10000	.0120	.0016
24	9600	.0104	.0016
23	9200	.0088	.0015
22	8800	.0073	.0011
21	8400	.0062	.0010
20	8000	.0052	.0010
19	7600	.0042	.0006
18	7200	.0036	.0006
17	6800	.0030	
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-26B

SPECTRUM: Fighter Lubricate with MoS_2

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

ERAGE WIDTH: 1.4983 (SPECIMEN WAS MEASURED before drilling together, see back of report)

ERAGE THICKNESS: .3757

EA: .5629 R CAL 18652

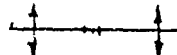
SELIN E STRESS: 34 KSI CS 97.5

X. LOAD: 19138.6 AP 7.66

CLES AT / FAILURE: *

2 Lives / *
③ 1,458,278 L.P.S. = 15,235.09 FLT-HRS

STATIC LOAD A- K#
B- K#



ORIGIN LIES AT CHAMFER/MATING SURFACE
INTERFACE. MATING SURFACES WERE
MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15200	.4270	.0704
38	14800	.4066	.0806
37	14400	.3260	.0415
36	14000	.2545	.0273
35	13600	.2572	.0236
34	13200	.2336	.0221
33	12800	.2115	.0202
32	12400	.1913	.0200
31	12000	.1713	.0190
30	11600	.1523	.0158
29	11200	.1365	.0162
28	10800	.1203	.0155
27	10400	.1048	.0140
26	10000	.0908	.0150
25	9600	.0758	.0120
24	9200	.0638	.0081
23	8800	.0557	.0081
22	8400	.0476	.0063
21	8000	.0413	.0065
20	7600	.0348	.0063
19	7200	.0285	.0058
18	6800	.0227	.0041
17	6400	.0186	.0041
16	6000	.0145	.0020
15	5600	.0126	.0022
14	5200	.0103	
13	4800		
12	4400		
11	4000		
10	3600		
9	3200		
8	2800		
7	2400		
6	2000		
5	1600		
4	1200		
3	800		
2	400		
1			

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPF-27A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 90

RAGE WIDTH: 1.5021 1.4999 1.4999 1.5042 1.5045

RAGE THICKNESS: .3763 .3774 .3736 .3775 .3757 .3775

A: .5653 R CAL 18962

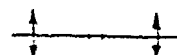
ELINE STRESS: 34 KSI CS 99%

. LOAD: 19220.2 AA 770

LES AT TERMINATION/FAILURE:

2 Lives /

TATIC LOAD A-11.97 K#
B-12.50 K#



ORIGIN LIES ON CHAMFERED
CORNER SURFACE.

MATING SURFACES WERE MILLED

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.2092	.0704
39	15600	.1888	.0167
38	15200	.1721	.0141
37	14800	.1580	.0139
36	14400	.1441	.0121
35	14000	.1320	.0120
34	13600	.1200	.0109
33	13200	.1091	.0081
32	12800	.1010	.0081
31	12400	.0929	.0082
30	12000	.0847	.0067
29	11600	.0780	.0058
28	11200	.0722	.0064
27	10800	.0658	.0055
26	10400	.0603	.0050
25	10000	.0553	.0048
24	9600	.0505	.0058
23	9200	.0447	.0057
22	8800	.0390	.0021
21	8400	.0369	.0025
20	8000	.0344	.0038
19	7600	.0306	.0041
18	7200	.0265	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-28A

SPECTRUM: Fighter

TEST DATE: _____ 15

TEST FRAME: 1 2 3 ④ 5 6

RAGE WIDTH: 1.4983 1.4962 1.4962 1.498 1.5011

RAGE THICKNESS: .3792 .3795 .3793 .3764 .3806 .3806

A: .5682 R cal 18478

ELINE STRESS: 34KSC CS 96%

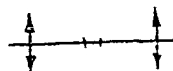
LOAD: 19218.3 AP 773

1 Life

LES AT TERMINATION: _____

2 Lives/ _____

TATIC LOAD A-14.26 K#
B-15.50 K#



ORIGIN LIES ON RADIIUS OF
CORNER. MATING SURFACES
WERE MILLED.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0868	.0046
39	15600	.0802	.0045
38	15200	.0757	.0044
37	14800	.0713	.0043
36	14400	.0670	.0036
35	14000	.0634	.0030
34	13600	.0604	.0028
33	13200	.0576	.0026
32	12800	.0550	.0033
31	12400	.0517	.0029
30	12000	.0488	.0030
29	11600	.0458	.0030
28	11200	.0428	.0031
27	10800	.0397	.0029
26	10400	.0368	.0036
25	10000	.0332	.0024
24	9600	.0308	.0018
23	9200	.0290	.0021
22	8800	.0269	.0025
21	8400	.0244	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-29A

SPECTRUM: Fighter

TEST DATE: _____ 28

TEST FRAME: ① 2 3 4 5 6

RAGE WIDTH: 1.4985 1.4971 1.4972 1.4987 1.4998

RAGE THICKNESS: .3808 .3814 .3822 .3802 .3804 .3798

A: .5706 R cal 18752

ELINE STRESS: 34KSC CS 94.7

LOAD: 19401.4 AP 774

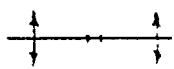
1 Life

LES AT TERMINATION: _____

2 Lives/ _____

@ 1,076,801 L.P.S. ~ 11,242.37 FLT. HRS

TATIC LOAD A-16.30 K#
B-16.83 K#



ORIGIN LIES AT CORNER
(WHICH HAD A RADIUS)

MATING SURFACE WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600	.0279	.0041
28	11200	.0238	.0034
27	10800	.0202	.0034
26	10400	.0168	.0033
25	10000	.0135	.0026
24	9600	.0109	.0023
23	9200	.0086	.0019
22	8800	.0067	.0014
21	8400	.0053	.0010
20	8000	.0043	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: YWPF-30B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5 6 (89)

RAGE WIDTH: 1.5042 1.5072 1.5112 1.5051 1.5041 →

RAGE THICKNESS: .3777 .3793 .3753 .3768 .3782 .3789

A: .5681 Rca: 18627

ELINE STRESS: 34KSI C S 96V

LOAD: 19316.6 AD 773 1 Life

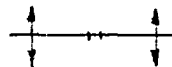
LES AT TERMINATION/REPAIR:

2 Lives/

@ 1,076,957 L.P.'s = 11,241.91

TATIC LOAD A-17.92 K#

B-15.79 K#



ORIGIN LIES AT CORNER.

MATING SURF: CES WERE MILLED

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600	.0366	.0005
28	11200	.0361	.0021
27	10800	.0340	.0020
26	10400	.0320	.0019
25	10000	.0301	.0018
24	9600	.0283	.0019
23	9200	.0264	.0017
22	8800	.0247	.0017
21	8400	.0230	.0016
20	8000	.0214	.0016
19	7600	.0198	.0016
18	7200	.0182	.0014
17	6800	.0168	.0013
16	6400	.0155	.0014
15	6000	.0141	.0012
14	5600	.0129	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

2.3.2 YWPB

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-1B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.4996 1.4995 1.4997 1.4997 1.4995

AVERAGE THICKNESS: .385 .3813 .3796 .3818 .3828 .3819

AREA: .5721 R-Cal 18752 (7996)
Cal.S 42%

BASILINE STRESS: 33Ksi Appt 755

MAX. LOAD: 18878

CYCLES AT TERMINATION/FAILURE: 2 Lives/

@

STATIC LOAD A-17360 K#
B-15380 K#

Origin lies on Bolt Hole Surface.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-2A

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5007 1.5004 1.5007 1.5008 1.5008

AVERAGE THICKNESS: .3848 .3860 .3823 .3853 .3857 .3847

AREA: .5715 R-Cal 18094 (7727)
Cal.S 41%

BASILINE STRESS: 33Ksi Appt 762

MAX. LOAD: 19056

CYCLES AT TERMINATION/FAILURE: 3 Lives/

@

STATIC LOAD A-15620 K#
B-17600 K#

Origin lies at corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0393
	2480	.0297
	2380	.0225
	2280	.0166
	2180	.0121
	2080	.0092
	1980	.0073
	1880	.0056
	1780	.0042
	1680	.0035
	1580	.0027
	1480	.0022
	1380	.0018
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0958
	2480	.0781
	2380	.0618
	2280	.0497
	2180	.0419
	2080	.0342
	1980	.0282
	1880	.0246
	1780	.0212
	1680	.0181
	1580	.0150
	1480	.0122
	1380	.0099
One Life	1280	.0087
	1200	.0068
	1100	.0055
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-3B
SPECTRUM: Bomber
TEST DATE: ABDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5014 1.5008 1.5009 1.5024 1.5015
AVERAGE THICKNESS: 3853 3838 3811 3831 3841 3844
AREA: .5755 R-Cal 18982 (8100)
BASELINE STRESS: 33ksi Cal.S 43%
MAX. LOAD: 18991 Apt 760
CYCLES AT TERMINATION/FAILURE: 3Lives/
@
STATIC LOAD A-16840 K#
B-15410 K#

Origin lies on Plate B surface.

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-4B
SPECTRUM: Bomber
TEST DATE: ABDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4997 1.5012 1.5014 1.4981 1.4982
AVERAGE THICKNESS: 3842 3861 3817 3854 3843 3837
AREA: .5763 R-Cal 18478 (7894)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 19016 Apt 761
CYCLES AT TERMINATION/FAILURE: 2Lives/
@
STATIC LOAD A-17840 K#
B-15500 K#

Origin lies at corner. Both Plate Surfaces (A & B) were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1052
	2480	.0329
	2380	.0612
	2280	.0465
	2180	.0352
	2080	.0293
	1980	.0232
	1880	.0177
	1780	.0139
	1680	.0101
	1580	.0067
	1480	.0039
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1329
	2480	.1067
	2380	.0798
	2280	.0598
	2180	.0441
	2080	.0340
	1980	.0267
	1880	.0226
	1780	.0195
	1680	.0163
	1580	.0144
	1480	.0120
	1380	.0088
One Life	1280	.0067
	1200	.0058
	1100	.0047
	1000	.0035
	900	.0025
	800	.0019
	700	.0013
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
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FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-5B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5024 1.5033 1.5024 1.5019 1.5019
AVERAGE THICKNESS: .3834 .3863 .3787 .3858 .3832 .3832
AREA: .5761 R-Cal 18652 (7957)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 19010 Apt 760
CYCLES AT TERMINATION/FAILURE: 3Lives/
②
STATIC LOAD A-17,400 K#
B-17060 K#
origin lies at corner.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-6A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5018 1.5014 1.5011 1.5023 1.5024
AVERAGE THICKNESS: .3838 .3847 .3797 .3846 .3843 .3857
AREA: .5764 R-Cal 18982 (8100)
BASELINE STRESS: 33ksi Cal.S 43%
MAX. LOAD: 19021 Apt 761
CYCLES AT TERMINATION/FAILURE: 2Lives/
②
STATIC LOAD A-13620 K#
B-15700 K#
origin lies at corner Both Plate
(A+B)
Surfaces were milled.

FRAC TOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0328
	2480	.0283
	2380	.0258
	2280	.0226
	2180	.0196
	2080	.0167
	1980	.0139
	1880	.0118
	1780	.0101
	1680	.0082
	1580	.0067
	1480	.0052
	1380	.0038
One Life	1280	.0031
	1200	.0023
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1664
	2480	.1429
	2380	.1194
	2280	.0982
	2180	.0812
	2080	.0685
	1980	.0592
	1880	.0518
	1780	.0453
	1680	.0382
	1580	.0325
	1480	.0268
	1380	.0221
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Part 10th Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-7B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5004 1.5010 1.5027 1.4993 1.4986
AVERAGE THICKNESS: .3864 .3878 .3882 .3833 .3864 .3865
AREA: .5798 R-Cal 18094 (7767)
Cal.S 40%
BASELINE STRESS: 33K Appt 7.65
MAX. LOAD: 19139
CYCLES AT TERMINATION/FAILURE: 2 Lives /
②
STATIC LOAD A- 10,410 K#
B- 15,520 K#

Origin lies on Plate B surface due to relaxed tolerances (tool marks) Both Plate surfaces (A+B) were milled

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-8B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5000 1.5031 1.5030 1.4965 1.4965
AVERAGE THICKNESS: .3832 .3850 .3788 .3846 .3845 .3831
AREA: .51748 R-Cal 15478 (1834)
Cal.S 42%
BASELINE STRESS: 35Ksi Appt 7.59
MAX. LOAD: 19068
CYCLES AT TERMINATION/FAILURE: * 31 Lives /
②
STATIC LOAD A- K#
B- K#

This specimen had failed at approx. 2438 FLTS. No record of number of load points. Origin lies on Plate B surface due to relaxed tolerances (with tool marks). Both plate surfaces (A+B) were milled

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FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Thr. 2 Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0365 .0026
	2480	.0340 .0029
	2380	.0311 .0035
	2280	.0276 .0036
	2180	.0240 .0030
	2080	.0210 .0030
	1980	.0179 .0027
	1880	.0152 .0031
	1780	.0121 .0029
	1680	.0101 .0018
	1580	.0093
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	.1432
	2380	.0729
	2280	.0695
	2180	.0363
	2080	.0316
	1980	.0280
	1880	.0188
	1780	.0125
	1680	.0066
	1580	.0035
	1480	.0026
	1380	.0018
One Life	1280	.0030
	1200	.0015
	1100	.0020
	1000	.0018
	900	.0013
	800	.0005
	700	
	600	
	500	
	400	
	300	
	200	

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GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-9B
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.501 1.5007 1.5008 1.5010 1.5015
AVERAGE THICKNESS: 3860 3861 3850 3862 3864 3858
AREA: .5734 R-Cal 18652 (7957)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 19120 Apt 765
CYCLES AT TERMINATION/FAILURE: 2 lives/
@
STATIC LOAD A-17480 K#
B-13500 K#

Origin lies on Bolt Hole surface
at corner.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-10B
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5011 1.5016 1.5023 1.5005 1.4998
AVERAGE THICKNESS: 3965 3981 3956 3995 3948 3848
AREA: .5801 R-Cal 18752 (7996)
BASELINE STRESS: 33ksi Cal.S 42%
MAX. LOAD: 19144 Apt 766
CYCLES AT TERMINATION/FAILURE: 31 lives/
@

STATIC LOAD A- K#
B- K#
This specimen had failed before
2 lives (2560 Flts) between 2090 &
2100 Flts. Origin lies on plate
surface - near corner. Both
plate surfaces (A & B) were milled
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FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1448
	2480	.1173
	2380	.0919
	2280	.0717
	2180	.0594
	2080	.0489
	1980	.0416
	1880	.0337
	1780	.0289
	1680	.0252
	1580	.0218
	1480	.0188
	1380	.0156
One Life	1280	.0129
	1200	.0106
	1100	.0086
	1000	.0065
	900	.0050
	800	.0040
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	.4673
	2080	.4229
	1980	.3770
	1880	.2160
	1780	.1648
	1680	.1273
	1580	.0977
	1480	.0741
	1380	.0590
One Life	1280	.0450
	1200	.0365
	1100	.0281
	1000	.0218
	900	.0181
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
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FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-11B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.4992 1.4977 1.4972 1.5005 1.5015

AVERAGE THICKNESS: .3821 .3821 .3820 .3822 .3819 .3851

AREA: .5728 R-Cal 18982 (8100)
Cal.S 43%

BASLINE STRESS: 33Ksi Apt 7.56

MAX. LOAD: 18902

CYCLES AT / FAILURE: * @Lives/

@

STATIC LOAD A- K#
B- K#

* PLATE "B" FAILED IN LESS THAN 2
LIVES PLATE "A" SUSTAINED LOAD
FOR 2 LIVES. THIS SPECIMEN FAILED

AT 3806 FLTS. Origin lies on
Both Hole surface. Both Plate surfaces (A+B)
were killed.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-12B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5013 1.5017 1.5011 1.5015 1.5008

AVERAGE THICKNESS: .3816 .3823 .3822 .3820 .3818 .3838

AREA: .5729 R-Cal 18418 (7894)
Cal.S 42%

BASLINE STRESS: 33Ksi Apt 7.56

MAX. LOAD: 18926

CYCLES AT / FAILURE: * @Lives/

@ 458,628 R.S. = 1778.71 FLTS *

STATIC LOAD A- K#
B- K#

Origin lies on surface of Plate B
which mates Plate A. Origin was
due to fretting.

920
224

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2560	
	2480	.4597
	2380	.3139
	2280	.2362
	2180	.1761
	2080	.1363
	1980	.1062
	1880	.0841
	1780	.0684
	1680	.0562
	1580	.0473
	1480	.0404
	1380	.0347
	1280	.0284
One Life	1200	.0241
	1100	.0196
	1000	.0170
	900	.0116
	800	.0085
	700	.0072
	600	.0053
	500	.0037
	400	.0021
	300	
	200	

FLIG.	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
	2560	
Two Lives	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	.4731
	1680	.2731
	1580	.1927
	1480	.1356
	1380	.0946
One Life	1280	.0638
	1200	.0481
	1100	.0349
	1000	.0263
	900	.0180
	800	.0137
	700	.0094
	600	.0067
	500	.0041
	400	.0023
	300	.0015
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-13A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5022 1.5016 1.5021 1.5020 1.5022
AVERAGE THICKNESS: 3840 3838 3795 3861 3842 3866
AREA: .5769 R-Cal 18052 (7957)
Cal.S 42%
BASELINE STRESS: 33Ksi Apt 7.62
MAX. LOAD: 19038
CYCLES AT TERMINATION/REMARKS: 20 Lives /
②
STATIC LOAD A-13540 K#
B-16240 K#

Origin lies at corner.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-14B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.4996 1.4996 1.5000 1.4996 1.4992
AVERAGE THICKNESS: 3826 3826 3844 3827 3825 3836
AREA: .5737 R-Cal 17925 (7668)
Cal.S 41%
BASELINE STRESS: 33Ksi Apt 7.57
MAX. LOAD: 18932
CYCLES AT TERMINATION/REMARKS: 20 Lives /
②
STATIC LOAD A-1586 K#
B-1404 K#

Origin lies at corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0281
	2480	.0473
	2380	.0460
	2280	.0409
	2180	.0352
	2080	.0622
	1980	.0543
	1880	.0435
	1780	.0354
	1680	.0288
	1580	.0244
	1480	.0191
	1380	.0143
One Life	1280	.0102
	1200	.0075
	1100	.0050
	1000	.0023
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1625
	2480	.1286
	2380	.0989
	2280	.0768
	2180	.0597
	2080	.0469
	1980	.0378
	1880	.0306
	1780	.0251
	1680	.0211
	1580	.0165
	1480	.0131
	1380	.0098
One Life	1280	.0074
	1200	.0060
	1100	.0050
	1000	.0042
	900	.0033
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-15B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: (1) B C D E F
2 3 4 5 6

AVERAGE WIDTH: 1.5015 1.5012 1.5017 1.5016 1.5014

AVERAGE THICKNESS: .3865 .3844 .3862 .3873 .3867

AREA: .5804 R-Cal 18752 (79%)
Cal.S 42%

BASILINE STRESS: 33Ksi Apt 7.66

MAX. LOAD: 19153

CYCLES AT ~~TERMINATION~~/FAILURE: * 3 Lives/

@ 57270 L.F.s = 2130 FLTS *

STATIC LOAD A- K#
B- K#

NUMBER IF LOAD POINTS ABOVE IS NOT
CORRECT, THIS SPECIMEN FAILED BETWEEN
2130 & 2140 FLTS. ORIGIN LIES ON
BOLT HOLE SURFACE NEAR CORNER

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-16B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A (1) B C D E F
2 3 4 5 6

AVERAGE WIDTH: 1.4981 1.4936 1.4933 1.5027 1.5029

AVERAGE THICKNESS: .3840 .385 .3846 .3845 .3860

AREA: .5753 R-Cal 18074 (77%)
Cal.S 41%

BASILINE STRESS: 33Ksi Apt 7.59

MAX. LOAD: 18984

CYCLES AT TERMINATION/FAILURE: 2 Lives/

@ 57270 L.F.s

STATIC LOAD A- 14300 K#

B- 11100 K#

Origin lies on Bolt hole surface.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3680	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3680	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-17A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5021 1.5014 1.5016 1.5023 1.5030
AVERAGE THICKNESS: 1.3837 1.3800 1.3818 1.3855 1.3827 1.3824
AREA: .5763 R-Cal 10932 (8100)
Cal.S 43%
BASELINE STRESS: 33ksi Apt. 761
MAX. LOAD: 19018
CYCLES AT TERMINATION/FAILURE: 2 Lives/

②
STATIC LOAD A-14420 K#
B-14960 K#

Origin lies on Bolt Hole surface.

FLTS	C.L. "a"	Δa
100	0003	0003

Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-18B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5005 1.4991 1.4999 1.5016 1.5015
AVERAGE THICKNESS: 1.3899 1.3921 1.3867 1.3924 1.3888 1.3896
AREA: .5851 R-Cal 10478 (7034)
Cal.S 41%
BASELINE STRESS: 33ksi Apt. 772
MAX. LOAD: 19307
CYCLES AT FAILURE: 2 Lives/

② 551481 h.P.C. = 2138.83 FLTS
STATIC LOAD A- K#
B- K#

origin lies on plate surface near corner. Fatigue origin was due to relaxed tolerances (Tool mill marks)
Both plate surfaces (A+B) were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1551
	2480	.1307
	2380	.1097
	2280	.0836
	2180	.0652
	2080	.0510
	1980	.0401
	1880	.0313
	1780	.0244
	1680	.0198
	1580	.0163
	1480	.0133
	1380	.0104
One Life	1280	.0076
	1200	.0061
	1100	.0048
	1000	.0036
	900	.0030
	800	.0025
	700	.0020
	600	.0017
	500	.0014
	400	.0011
	300	.0008
	200	.0006

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	.3914
	2080	.3766
	1980	.1878
	1880	.1291
	1780	.0914
	1680	.0654
	1580	.0498
	1480	.0367
	1380	.0299
One Life	1280	.0245
	1200	.0198
	1100	.0155
	1000	.0118
	900	.0083
	800	.0056
	700	.0045
	600	.0037
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-19A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5034 1.5035 1.5037 1.5031 1.5031
AVERAGE THICKNESS: .3801 .3824 .3772 .3818 .3796 .3795
AREA: .5715 R-Cal 18652 (795)
Cal.S 42%
BASELINE STRESS: 33KSI Appt. 7.54
MAX. LOAD: 18850
CYCLES AT TERMINATION/~~REMARKS~~: 2 Lives/
②
STATIC LOAD: A-12.00 K#
B-16.36 K#

Origin lies on Plate A surface.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-20A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5019 1.5023 1.5023 1.5014 1.5011
AVERAGE THICKNESS: .3838 .3822 .3800 .3864 .3830 .3832
AREA: .5764 R-Cal 18382 (8100)
Cal.S 43%
BASELINE STRESS: 33KSI Appt. 7.61
MAX. LOAD: 19020
CYCLES AT TERMINATION/~~REMARKS~~: 2 Lives/
②
STATIC LOAD: A-16,000 K#
B-17,000 K#

Origin lies on Plate A surface.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1808
	2480	.1377
	2380	.1012
	2280	.0772
	2180	.0644
	2080	.0563
	1980	.0493
	1880	.0461
	1780	.0448
	1680	.0445
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0694
	2480	.0564
	2380	.0442
	2280	.0344
	2180	.0272
	2080	.0208
	1980	.0173
	1880	.0151
	1780	.0126
	1680	.0109
	1580	.0072
	1480	.0075
	1380	.0063
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-21B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.4934 1.4934 1.5007 1.4993 1.4980

AVERAGE THICKNESS: .3853 .3865 .3817 .3865 .3861 .3856

AREA: .5717 R-Cal 18474 (7224)

BASLINE STRESS: 33ksi Cal.S 41%

MAX. LOAD: 19063 Apt 763

CYCLES AT TERMINATION/FAILURE: * 2080

* STATIC LOAD A- K#
B- K#
* This specimen had failed before 2 lines (2560 FLT's) between 2080 and 2090 FLT's origin lies on Bolt Hole surface. Both Plate surfaces (A & B) were milled

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-22B

SPECTRUM: Bomber

TEST DATE: _____

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.4980 1.4966 1.4972 1.4990 1.4991

AVERAGE THICKNESS: .3834 .3853 .3847 .3801 .3841 .3840

AREA: .5747 R-Cal 16652 (7257)

BASLINE STRESS: 33ksi Cal.S 42%

MAX. LOAD: 18965 Apt 759

CYCLES AT TERMINATION/FAILURE: 21 Lives

* STATIC LOAD A- 16.74 K#
B- 14.53 K#
* origin lies at corner. Both Plate surfaces (A & B) were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	.4216
	2080	.3849
	1980	.2760
	1880	.2166
	1780	.1708
	1680	.1352
	1580	.1054
	1480	.0812
	1380	.0615
One Life	1280	.0417
	1200	.0299
	1100	.0192
	1000	.0149
	900	.0113
	800	.0077
	700	.0044
	600	.0028
	500	.0018
	400	.0011
	300	.0008
	200	.0005

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0872
	2480	.0741
	2380	.0587
	2280	.0468
	2180	.0392
	2080	.0336
	1980	.0292
	1880	.0238
	1780	.0201
	1680	.0172
	1580	.0147
	1480	.0120
	1380	.0107
One Life	1280	.0097
	1200	.0090
	1100	.0073
	1000	.0061
	900	.0051
	800	.0042
	700	.0039
	600	.0022
	500	.0015
	400	.0010
	300	
	200	

625
2229

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-23B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.4999 | 1.5002 | 1.5008 | 1.4992 | 1.4994
AVERAGE THICKNESS: .3817 | .3847 | .3782 | .3851 | .3801 | .3806
AREA: .5724 R-Cal 17325 (7662)
BASELINE STRESS: 38ksi Cal.S 41%
MAX. LOAD: 18895 Apt 7.56
CYCLES AT TERMINATION/FAILURE: 2 Lives /

②
STATIC LOAD A-17.07 K#
B-15.66 K#

Origin lies on Plate B surface.
near corner. Both Plate surfaces
(A & B) were milled.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-24A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.5003 | 1.5009 | 1.5005 | 1.4994 | 1.5004
AVERAGE THICKNESS: .3808 | .3833 | .3805 | .3827 | .3785 | .3792
AREA: .5714 R-Cal 18034 (7727)
BASELINE STRESS: 33ksi Cal.S 41%
MAX. LOAD: 18955 Apt 7.54
CYCLES AT TERMINATION/FAILURE: 2 Lives /

②
STATIC LOAD A-16.63 K#
B-17.80 K#

Origin lies on Bolt Hole surface
near corner.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0418
	2480	.0356
	2380	.0293
	2280	.0242
	2180	.0206
	2080	.0174
	1980	.0145
	1880	.0120
	1780	.0097
	1680	.0074
	1580	.0059
	1480	.0045
	1380	.0036
One Life	1280	.0029
	1200	.0022
	1100	.0019
	1000	.0014
	900	.0009
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0424
	2480	.0379
	2380	.0332
	2280	.0282
	2180	.0238
	2080	.0205
	1980	.0172
	1880	.0152
	1780	.0130
	1680	.0112
	1580	.0092
	1480	.0080
	1380	.0067
One Life	1280	.0053
	1200	.0046
	1100	.0039
	1000	.0034
	900	.0029
	800	.0025
	700	.0022
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-25B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.4991 1.4991 1.4985 1.4997 1.5000
AVERAGE THICKNESS: 3829 3807 3853 3828 3820
AREA: .5748 R-Cal 18478 (7894)
BASELINE STRESS: 33Ksi Cal.S 42%
MAX. LOAD: 18969 Apt. 7.59
CYCLES AT TERMINATION/~~20000~~: 20 Lives/
@
STATIC LOAD A-1624 K#
B-1514 K#

Origin lies on Plate B surface due to relaxed tolerances Tool marks were the cause for initiation of fatigue. Both Plates Surfaces (A & B) were milled.

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-26B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
1 2 3 4 5 6
AVERAGE WIDTH: 1.4980 1.4984 1.4986 1.4985 1.4986
AVERAGE THICKNESS: 3818 3819 3813 3824 3817 3817
AREA: .5719 R-Cal 18652 (7557)
BASELINE STRESS: 33Ksi Cal.S 42%
MAX. LOAD: 18874 Apt. 7.55
CYCLES AT TERMINATION/~~20000~~: 20 Lives/
@
STATIC LOAD A-1772 K#
B-946 K#

Origin lies on Bolt Hole surface. Both Plate surfaces (A & B) were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.0762
	2480	.0645
	2380	.0510
	2280	.0419
	2180	.0354
	2080	.0297
	1980	.0243
	1880	.0209
	1780	.0185
	1680	.0157
	1580	.0141
	1480	.0123
	1380	.0092
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.3229
	2480	.2531
	2380	.1932
	2280	.1510
	2180	.1123
	2080	.0809
	1980	.0568
	1880	.0408
	1780	.0307
	1680	.0245
	1580	.0193
	1480	.0154
	1380	.0120
One Life	1280	.0093
	1200	.0076
	1100	.0058
	1000	.0041
	900	.0029
	800	.0021
	700	.0018
	600	.0015
	500	.0012
	400	.0010
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-27B
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
AVERAGE WIDTH: 1.4995 1.4987 1.4991 1.5001 1.5000
AVERAGE THICKNESS: .3819 .3811 .3808 .3813 .3803 .3801
AREA: .5727 R-Cal 17925 (7668)
BASELINE STRESS: 33 ksi Cal S 41%
MAX. LOAD: 18,898 Apt 7.56
CYCLES AT TERMINATION/FAILURE: @Lives/_____
②
STATIC LOAD A-17.07 K#
B-15.08 K#

Origins on Plate B surface
(due to relaxed milking tolerances
(tool marks) Both plate surfaces
(A & B) were villed.

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-28A
SPECTRUM: Bomber
TEST DATE: _____
TEST FRAME: A B C D E F
AVERAGE WIDTH: 1.5020 1.5019 1.5025 1.5023 1.5014
AVERAGE THICKNESS: .3833 .3828 .3826 .3811 .3852 .3845
AREA: .5758 R-Cal 18752 (7994)
BASELINE STRESS: 33 ksi Cal S 42%
MAX. LOAD: 18,999 Apt 7.60
CYCLES AT TERMINATION/FAILURE: 2240 / _____
③

This specimen did not go 2 lines
but only ~~2240~~ between 2240 & 2250 Flts
origin lies at corner.

FRACTOGRAPHIC DATA

FLIGHT cycles	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1105
	2480	.0954
	2380	.0797
	2280	.0656
	2180	.0563
	2080	.0482
	1980	.0404
	1880	.0338
	1780	.0291
	1680	.0239
	1580	.0199
	1480	.0164
	1380	.0144
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT cycles	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.1105
	2480	
	2380	
	2280	.4437
	2180	.2947
	2080	.2100
	1980	.1552
	1880	.1162
	1780	.0870
	1680	.0645
	1580	.0495
	1480	.0378
	1380	.0278
One Life	1280	.0221
	1200	.0176
	1100	.0133
	1000	.0102
	900	.0066
	800	
	700	
	600	
	500	
	400	
	300	
	200	

Fracture damaged by
bulking on itself

GENERAL DYNAMICS
Fast March Division
TAINATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-29A
SPECTRUM: Bomber
TEST DATE: 1/23/59
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4999 1.4922 1.4999 1.5009 1.5002
AVERAGE THICKNESS: 3810 3823 3798 3825 3799 3806
AREA: .5715 R-108 18094 (7727)
BASELINE STRESS: 33 Ksi Cut S 41%
MAX. LOAD: 18859 1st 7.54
CYCLES AT TERMINATION/FAILURE: 23 Lives /
(3)

This specimen had failed before
2 live (2560 FWT) between 2450 &
2460 FWT. Origin lies on Bolt
hole surface. Both plate surfaces
(A & B) were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
*	2380	.5380
	2280	.5637
	2180	.5900
	2080	.6132
	1980	.6327
	1880	.6525
	1780	.6727
	1680	.6923
	1580	.7120
	1480	.7313
	1380	.7507
One Life	1280	.7697
	1200	.7883
	1100	.8067
	1000	.8249
	900	.8429
	800	.8607
	700	.8783
	600	.8957
	500	.9129
	400	.9297
	300	.9463
	200	.9627

FATIGUE TEST DATA

SPECIMEN NUMBER: YWPB-30A
SPECTRUM: Bomber
TEST DATE: 1/23/59
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5009 1.5019 1.5017 1.5018 1.5022
AVERAGE THICKNESS: 3834 3821 3815 3841 3846 3847
AREA: .5758 R-108 18382 (8100)
BASELINE STRESS: 33 Ksi Cut S 43%
MAX. LOAD: 19002 1st 7.60
CYCLES AT TERMINATION/FAILURE: 23 Lives /
(3)

origin lies at corner.
n-13.06 in
p-15.86 in

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	.2351
	2480	.2524
	2380	.2697
	2280	.2863
	2180	.3029
	2080	.3197
	1980	.3363
	1880	.3529
	1780	.3697
	1680	.3863
	1580	.4029
	1480	.4197
	1380	.4363
One Life	1280	.4529
	1200	.4697
	1100	.4863
	1000	.5029
	900	.5197
	800	.5363
	700	.5529
	600	.5697
	500	.5863
	400	.6029
	300	.6197
	200	.6363

2.3.3 HYWPF

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-1BSPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6 288ERAGE WIDTH: 1.4995 | 1.4970 | 1.4909 | 1.5012 | 1.5010ERAGE THICKNESS: 3766 | 3773 | 3737 | 3769 | 3772 | 3774EA: 5647 R cal. 18752SELINER STRESS: 40.8 KSI C.S. 81.4X. LOAD: 23041.5 APOT 92.2CLES AT ~~FAILURE~~/FAILURE: *1 Lives/ 765747

② 613,210 L.P.S = 6406.40 FLT-HRS *

STATIC LOAD A- K#

B- K#

ORIGIN LIES ON BOLT HOLE SURFACE
MATING SURFACES WERE MILLED.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800	<u>2454</u>	<u>0021</u>
16	6400	<u>2433</u>	<u>0725</u>
15	6000	<u>1708</u>	<u>0413</u>
14	5600	<u>1295</u>	<u>0291</u>
13	5200	<u>1004</u>	<u>0263</u>
12	4800	<u>0741</u>	<u>0180</u>
11	4400	<u>0561</u>	<u>0139</u>
10	4000	<u>0427</u>	<u>0127</u>
9	3600	<u>0295</u>	<u>0111</u>
8	3200	<u>0184</u>	<u>0073</u>
7	2800	<u>0111</u>	<u>0027</u>
6	2400	<u>0084</u>	<u>0027</u>
5	2000	<u>0057</u>	<u>0017</u>
4	1600	<u>0039</u>	<u>0017</u>
3	1200	<u>0022</u>	
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-2ASPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6 289ERAGE WIDTH: 1.5010 | 1.5023 | 1.5040 | 1.5000 | 1.4975ERAGE THICKNESS: 3758 | 3773 | 3723 | 3773 | 3750 | 3761EA: 5641 RC 18629SELINER STRESS: 40.8 KSI CS 80.9X. LOAD: 23016.7 AP 92.1CLES AT ~~FAILURE~~/FAILURE: *1 Lives/ 765747

② 607,686 = 6348.69 FLT-HRS *

STATIC LOAD A- K#

B- K#

ORIGIN LIES ON BOLT HOLE SURFACE
MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400	<u>4932</u>	<u>2177</u>
15	6000	<u>2755</u>	<u>0761</u>
14	5600	<u>1994</u>	<u>0439</u>
13	5200	<u>1555</u>	<u>0302</u>
12	4800	<u>1253</u>	<u>0282</u>
11	4400	<u>0971</u>	<u>0242</u>
10	4000	<u>0729</u>	<u>0254</u>
9	3600	<u>0475</u>	<u>0205</u>
8	3200	<u>0270</u>	<u>0125</u>
7	2800	<u>0155</u>	<u>0053</u>
6	2400	<u>0102</u>	<u>0031</u>
5	2000	<u>0071</u>	<u>0026</u>
4	1600	<u>0045</u>	<u>0015</u>
3	1200	<u>0030</u>	<u>0016</u>
2	800	<u>0014</u>	
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-3A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (1) 2 3 4 5 6 (39)

ERAGE WIDTH: 1.4998 1.5010 1.5010 1.4979 1.4975

ERAGE THICKNESS: .3782 .3793 .3751 .3775 .3751 .3796

EA: .5672 Rcal, 18752

SELINE STRESS: 40.8 KSC C.S. 81%

X. LOAD: 23142.8 A.P. 925

CLES AT TERMINATION/REMARKS:

2 Lives/

@ 459448 L.P.S = 4800 FLT-HRS

STATIC LOAD A-12.89 K#

B-13.72 K#

ORIGIN LIES AT CHAMFER/SURFACE CORNER
MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.1110	.0225
11	4400	.0885	.0187
10	4000	.0698	.0164
9	3600	.0534	.0129
8	3200	.0474	.0126
7	2800	.0288	.0106
6	2400	.0182	.0079
5	2000	.0103	.0031
4	1600	.0072	.0030
3	1200	.0042	.0016
2	800	.0026	
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-4B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 (2) 3 4 5 6 (39)

ERAGE WIDTH: 1.4982 1.4954 1.4963 1.5007 1.5002

ERAGE THICKNESS: .3806 .3808 .3789 .3816 .3811 .3814

EA: .5703 Rcal 18629

SELINE STRESS: 40.8 KSC C.S. 80%

X. LOAD: 23268.4 A.P. 930

CLES AT TERMINATION/REMARKS:

2 Lives/

@ 459448 L.P.S = 4800 FLT-HRS

STATIC LOAD A-15.72 K#

B-15.76 K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.0288	.0067
11	4400	.0221	.0053
10	4000	.0168	.0031
9	3600	.0137	.0043
8	3200	.0094	.0032
7	2800	.0062	.0025
6	2400	.0037	.0017
5	2000	.0020	.0006
4	1600	.0014	.0005
3	1200	.0009	.0005
2	800	.0004	.0003
1	400	.0001	

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-5A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

ERAGE WIDTH: 1.5041 1.5038 1.5037 1.5053 1.5035

ERAGE THICKNESS: .3801 .3815 .3776 .3805 .3803 .3804

EA: .5716 R Cal 103PL

SELIN STRESS: 40.8 KSC CWS 81.3% *P 93.3

X. LOAD: 23323.2

CLES AT TERMINATION/

2 Lives/ 4300 FLT-HRS
@ 459448 L.P.'s - 16.60

STATIC LOAD A- 13.15 K#

B- 15.98 K#

ORIGIN LIES ON SURFACE WHICH MATES WITH PLATE "B" (NEAR HOLE CORNER)

MATING SURFACES WERE MILLED.

ORIGIN APPEARS TO START FROM P. MILL TOOL MARK

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.0456	.0084
11	4400	.0372	.0064
10	4000	.0306	.0028
9	3600	.0248	.0046
8	3200	.0202	.0041
7	2800	.0161	.0031
6	2400	.0130	.0028
5	2000	.0102	.0013
4	1600	.0089	.0011
3	1200	.0078	.0010
2	800	.0068	
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-6A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

ERAGE WIDTH: 1.5001 1.5019 1.5012 1.4982 1.4989

ERAGE THICKNESS: .3816 .3823 .3720 .3816 .3824 .3826

EA: .5724 R Cal 18478

SELIN STRESS: 40.8 KSC CWS 79.1 *P 934

X. LOAD: 23354.3

CLES AT TERMINATION/

2 Lives/ 4800 FLT-HRS
@ 459448 L.P.'s - 16.60

STATIC LOAD A- 13.15 K#

B- 15.69 K#

ORIGIN LIES AT PLATE SURFACE/RADIUS CORNER. MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.1182	.0302
11	4400	.0880	.0186
10	4000	.0694	.0171
9	3600	.0523	.0156
8	3200	.0367	.0139
7	2800	.0228	.0106
6	2400	.0168	.0060
5	2000	.0122	.0046
4	1600	.0087	.0035
3	1200	.0054	.0033
2	800	.0030	.0013
1	400	.0017	

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-7B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 ①

ERAGE WIDTH: 1.4984 1.4987 1.5006 1.4966 1.4968

ERAGE THICKNESS: .3791 .3798 .3781 .3782 .3808 .3801

EA: .5679 Real 18652

SELINE STRESS: 40.8 KSC C.S. 80.5

X. LOAD: 23173.7 A.P. 927

CLES AT TERMINATION/_____

2 Lives/_____

② 459448 L.P.s = 4800 FLT-HRS

STATIC LOAD A-16.78 K#

B-15.91 K#

ORIGIN LIES ON BOLT-HOLE SURFACE

MATING PLATES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.0163	.0051
11	4400	.0107	.0039
10	4000	.0068	.0024
9	3600	.0044	.0014
8	3200	.0030	.0010
7	2800	.0020	.0006
6	2400	.0014	.0004
5	2000	.0010	.0003
4	1600	.0007	.0003
3	1200	.0004	.0002
2	800	.0002	.0001
1	400	.0001	

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HYWPF-8B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 ①

ERAGE WIDTH: 1.4906 1.4905 1.4902 1.4900 1.4900

ERAGE THICKNESS: .3781 .3785 .3763 .3784 .3785 .3786

EA: .5636 Real 18084

SELINE STRESS: 40.8 KSC C.S. 78.6

X. LOAD: 22994.7 A.P. 919

CLES AT TERMINATION/_____

2 Lives/_____

② 459448 L.P.s = 4800 FLT-HRS

STATIC LOAD A-14.50 K#

B-13.22 K#

ORIGIN LIES ON BOLT HOLE SURFACE

NEAR CORNER OF MATING SURFACES.

MATING SURFACES WERE MILLED

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.1150	.0265
11	4400	.0885	.0172
10	4000	.0713	.0143
9	3600	.0570	.0137
8	3200	.0433	.0107
7	2800	.0326	.0112
6	2400	.0214	.0109
5	2000	.0115	.0067
4	1600	.0058	.0025
3	1200	.0033	.0019
2	800	.0014	.0009
1	400	.0005	

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HUWPF-9

SPECTRUM: Fighter

TEST DATE: 90

TEST FRAME: 1 2 3 4 5 6

ERAGE WIDTH: 1.5066 1.5088 1.5080 1.5017 1.5050

ERAGE THICKNESS: .3789 .3805 .3760 .3786 .3795 .3799

EA: .5709 R. CAL 18982

SELIN STRESS: 40.8 KSI C. S. 81.5

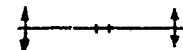
X. LOAD: 23,292.7# 4. P. T. 93.2

CLES AT TERMINATION/ 1 Life

2 Lives/ 459,448 L.P.s
4800 FLT-HRS

STATIC LOAD A-15.64 K#

B-15.76 K#



ORIGIN LIES ON BOLT HOLE SURFACE
MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.02121	.00603
11	4400	.01518	.00304
10	4000	.01214	.00267
9	3600	.00945	.00180
8	3200	.00765	.00185
7	2800	.00580	.00157
6	2400	.00423	.00141
5	2000	.00282	.00084
4	1600	.00198	.00068
3	1200	.00130	.00055
2	800	.00075	.00040
1	400	.00035	

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: HUWPF-10

SPECTRUM: Fighter

TEST DATE: 16

TEST FRAME: 1 2 3 4 5 6

ERAGE WIDTH: 1.5042 1.5030 1.5038 1.5053 1.5047

ERAGE THICKNESS: .3781 .3802 .3757 .3771 .3785 .3788

EA: .5687 R. CAL 10652

SELIN STRESS: 40.8 KSI C. S. 80.4

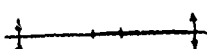
X. LOAD: 23,202.1# 4. P. T. 92.8

CLES AT TERMINATION/ 1 Life

2 Lives/ 459,448 L.P.s
4800 FLT-HRS

STATIC LOAD A-12.96 K#

B-14.37 K#



ORIGIN LIES ON BOLT HOLE SURFACE
MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800	.01217	.04159
11	4400	.07718	.02776
10	4000	.04942	.01706
9	3600	.03236	.01277
8	3200	.01959	.00846
7	2800	.01113	.00441
6	2400	.00672	.00337
5	2000	.00335	.00142
4	1600	.00193	.00051
3	1200	.00142	.00037
2	800	.00105	
1	400		

GENERAL DYNAMICS
Fatigue Division
TAINATION SHEET

2.3.4 BWPB

FATIGUE TEST DATA

FRACTOGRAPHIC DATA

SPECIMEN NUMBER: HYW03-1A

SPECTRUM: Bomber

TEST DATE: 1964

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.4984 1.4985 1.4981 1.4984 1.4986

AVERAGE THICKNESS: 3842 3845 3828 3948 3843 3848

AREA: .5757 39.6 R-108 18762 (7996)

BASLINE STRESS: 30 Ksi Cut S 357

MAX. LOAD: 23800 Int 912

CYCLES AT TERMINATION / FAILURE: 8 Lives /

(3) 224,015 L.P. = 868.80 Flts *

Simulation A 11 11

Origin lies on Bolt Hole Surface

Flts	CL "a"	ΔQ
100	0010	0010

TAINATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: HYW03-2B

SPECTRUM: Bomber

TEST DATE: 1964

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.4991 1.4993 1.4990 1.4996 1.4993

AVERAGE THICKNESS: 3852 3848 3828 3828 3873 3856

AREA: .5715 39.6 R-108 18094 (7727)

BASLINE STRESS: 30 Ksi Cut S 347

MAX. LOAD: 23868 Int 915

CYCLES AT TERMINATION / 8 Lives /

(3) Simulation A 17.74 11

11.96 11

Origin lies on Bolt Hole Surface.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	.3195
	800	.1806
	700	.1073
	600	.0794
	500	.0456
	400	.0295
	300	.0159
	200	.0035

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	.1990
	1200	.1460
	1100	.1006
	1000	.0713
	900	.0499
	800	.0330
	700	.0213
	600	.0140
	500	.0082
	400	.0047
	300	.0025
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: H YWPB-BB
SPECTRUM: Bomber
TEST DATE: 1 2 3 4 5 6
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4998 1.5004 1.5005 1.4993 1.4991
AVERAGE THICKNESS: 3.815 3.832 3.813 3.835 3.797 3.798
AREA: 5.722 3.6 R. Q. 18382 (61100)
BASELINE STRESS: 30 Ksi 3.57
MAX. LOAD: 22658 9.06
CYCLES AT 1178.83 /FAILURE: 8 Lives /
(3) 303952 L.R. = 1178.83 FLTS *
Survival Limit A- 1111
B- 1111

origin lies on Bolt Hole surface
near corner. *

FRAC TOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3680	
	3600	
	3520	
	3440	
	3360	
	3280	
	3200	
	3160	
	3080	
	2960	
	2880	
	2760	
	2680	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: H YWPB-4B
SPECTRUM: Bomber
TEST DATE: 1 2 3 4 5 6
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5007 1.5004 1.5007 1.5011 1.5006
AVERAGE THICKNESS: 3.893 3.915 3.867 3.918 3.897 3.882
AREA: 5.843 3.6 R. Q. 18478 (7820)
BASELINE STRESS: 30 Ksi 3.47
MAX. LOAD: 23136 9.25
CYCLES AT 998.78 /FAILURE: 8 Lives /
(3) 257529 L.R. = 998.78 FLTS *
Survival Limit A- 1111
B- 1111

origin lies on Bolt Hole surface
at corner. *

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3680	
	3600	
	3520	
	3440	
	3360	
	3280	
	3200	
	3160	
	3080	
	2960	
	2880	
	2760	
	2680	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLTS	C.L. A'	ΔA
100	0003	0003

FATIGUE TEST DATA

SPECIMEN NUMBER: HYWPB-5B

SPECTRUM: Bomber

TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5028 1.5036 1.5036 1.5023 1.5016

AVERAGE THICKNESS: 3803 3899 3831 3881 3856 3857

AREA: .5805 39.6 RCA 1802 1802

BASILINE STRESS: 33 Ksi 33% 9.19

MAX. LOAD: 22987

CYCLES AT TERMINATION: 11000 11000

origin lies on Bolt Hole Surface.

FRACTOGRAPHIC DATA

FLIGHT CYCLES	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3680	
	3600	
	3520	
	3440	
	3360	
	3280	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	.0706
	1200	.0595
	1100	.0338
	1000	.0231
	900	.0159
	800	.0107
	700	.0063
	600	.0039
	500	.0023
	400	.0013
	300	.0008
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: HYWPB-6A

SPECTRUM: Bomber

TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5024 1.5021 1.5028 1.5032 1.5015

AVERAGE THICKNESS: 3897 3829 3813 3897 3856 3848

AREA: .5764 39.6 RCA 1802 1802

BASILINE STRESS: 33 Ksi 33% 9.13

MAX. LOAD: 22826

CYCLES AT FAILURE: 11000 11000

*319448 L.P. = 1238.93 FLTS **

origin lies on Bolt Hole Surface near corner.

FLIGHT CYCLES	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3680	
	3600	
	3520	
	3440	
	3360	
	3280	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	.3580
	1200	.2506
	1100	.1545
	1000	.0994
	900	.0651
	800	.0437
	700	.0303
	600	.0189
	500	.0115
	400	.0058
	300	.0022
	200	

2.37

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3850	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

origin lies on Bolt Hole Surfaces
 Both Plate surfaces (A & B) were milled

FATIGUE TEST DATA

origin lies on Bolt Hole surface. Both Plate surfaces were milled.

FLIGHT 22222	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: HyWPB-9A

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.4979 1.4934 1.4998 1.4962 1.4963

AVERAGE THICKNESS: 3837 3843 3812 3850 3830 3850

AREA: .5748 R-Cal 18982 (B100)
Cal.S 3.6%

BASILINE STRESS: Apt 910

MAX. LOAD: 22760

CYCLES AT TERMINATION/FAILURE: 1 Lives/

@ 29800 R.P. = 1158.87 FLTS

STATIC LOAD A- K#
B- K#

Origin lies at Bolt Hole Surface/Corner transition.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
Two Lives	2660	
	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
	1280	
One Life	1100	.3769
	1000	.2172
	900	.1313
	800	.0887
	700	.0648
	600	.0463
	500	.0316
	400	.0187
	300	.0088
	200	.0046
		.0014

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: HyWPB-10B

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5002 1.4933 1.4934 1.5014 1.5013

AVERAGE THICKNESS: 3833 3855 3806 3861 3822 3820

AREA: .5750 R-Cal 18478 (7834)
Cal.S 3.5%

BASILINE STRESS: 39.6 Apt 911

MAX. LOAD: 22770

CYCLES AT TERMINATION/FAILURE: 1 Lives/

@ 257529 R.P. = 998.78 FLTS

STATIC LOAD A- K#
B- K#

Origin lies on Plate B surface.
Both Plate surfaces (A & B) were milled.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH.
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
	3360	
	3260	
	3160	
	3060	
	2960	
	2860	
	2760	
	2660	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
	1280	
One Life	1200	
	1100	.2841
	900	.1334
	800	.0787
	700	.0495
	600	.0323
	500	.0213
	400	.0118
	300	.0057
	200	.0034

FRACTOGRAPHIC DATA

2.3.5 LYWPF FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPF-1B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6 (88)

ERAGE WIDTH: 1.4995 1.4985 1.4990 1.5008 1.4999

ERAGE THICKNESS: .3804 .3822 .3813 .3818 .3784 .3782

EA: .5704 R CAL. 18752
C S 45.8
AP 608

SELIN STRESS: 30.6 KSI

X. LOAD: 17453.6

CLES AT TERMINATION/FAILURE: _____

3 Lives/ _____

②

STATIC LOAD A-18.030 K#
B-16.92 K#

2 Lives

See next page

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.00622	.00029
39	15600	.00593	.00033
38	15200	.00560	.00038
37	14800	.00522	.00024
36	14400	.00498	.00031
35	14000	.00467	.00027
34	13600	.00440	.00034
33	13200	.00406	.00029
32	12800	.00377	.00026
31	12400	.00351	.00013
30	12000	.00338	.00019
29	11600	.00319	.00023
28	11200	.00296	.00022
27	10800	.00274	.00016
26	10400	.00258	.00013
25	10000	.00245	.00017
24	9600	.00228	.00010
23	9200	.00218	.00009
22	8800	.00209	.00009
21	8400	.00200	.00012
20	8000	.00188	.00016
19	7600	.00172	.00005
18	7200	.00170	.00005
17	6800	.00165	.00015
16	6400	.00150	.00010
15	6000	.00148	.00010
14	5600	.00138	.0001
13	5200	.00127	.00010
12	4800	.00117	.00007
11	4400	.00110	.00006
10	4000	.00104	.00004
9	3600	.00100	.00004
8	3200	.00096	.00008
7	2800	.00088	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPF-2B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6 (88)

ERAGE WIDTH: 1.4999 1.5015 1.5005 1.4982 1.4985

ERAGE THICKNESS: .3783 .3780 .3755 .3767 .3809 .3803

EA: .5674 R CAL 18627
CALS. 45.8
AP. 634

SELIN STRESS: 30.6 KSI

X. LOAD: 17361.9

CLES AT TERMINATION/FAILURE: _____

3 Lives/ _____

②

STATIC LOAD A-16.85 K#
B-15.44 K#

ORIGIN LIES ON SURFACE WHICH
MATES WITH PLATE "A". MATING
SURFACES WERE MILLED.

2 Lives

See next page

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.01935	.00215
39	15600	.01720	.00170
38	15200	.01550	.00153
37	14800	.01397	.00150
36	14400	.01247	.00142
35	14000	.01105	.00127
34	13600	.00978	.00121
33	13200	.00857	.00129
32	12800	.00728	.00107
31	12400	.00621	.00093
30	12000	.00528	
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

Continued from previous page
FRACTOGRAPHIC DATA

LYWPF-1B

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
60	24000	.02181	.00116
59	23600	02065	00149
58	23200	01916	00134
57	22800	01782	00145
56	22400	01637	00116
55	22000	01521	00124
54	21600	01397	00117
53	21200	01280	00093
52	20800	01187	00076
51	20400	01111	00055
50	20000	01056	00073
49	19600	00983	00054
48	19200	00929	00030
47	18800	00899	00046
46	18400	00853	00052
45	18000	00801	00044
44	17600	00757	00027
43	17200	00730	00032
42	16800	00698	00035
41	16400	00663	00041

FRACTOGRAPHIC DATA

LYWPF-2B

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
60	24000	.09120	.00627
59	23600	08493	00479
58	23200	08014	00514
57	22800	07500	00554
56	22400	06946	00532
55	22000	06414	00349
54	21600	06065	00343
53	21200	05722	00369
52	20800	05353	00362
51	20400	04991	00349
50	20000	04642	00337
49	19600	04305	00279
48	19200	04026	00271
47	18800	03755	00329
46	18400	03426	00313
45	18000	03113	00302
44	17600	02811	00199
43	17200	02612	00265
42	16800	02347	00215
41	16400	02132	00197

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPF-3B
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 ③ 4 5 6 ⑨
 ERAGE WIDTH: 1.5010 | 1.5011 | 1.5012 | 1.5013 | 1.5014
 ERAGE THICKNESS: .3786 | .3774 | .3767 | .3765 | .3813 | .3810
 EA: .5682 R CAL 18982
 SELINE STRESS: 30.6 KSC C.S 44.6%
 X. LOAD: 17389.3 AP 6.96
 CLES AT TERMINATION/FAILURE: 3 Lives/

②
 STATIC LOAD A-17.54 K#
 B-15.95 K#
 ORIGIN LIES ON BOLT HOLE SURFACE
 NEAR CORNER. MATING SURFACES
 WERE KILLED.

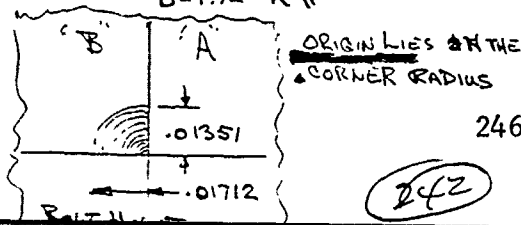
2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.01016	.00103
39	15600	.00913	.00102
38	15200	.00801	.00107
37	14800	.00694	.00090
36	14400	.00604	.00073
35	14000	.00531	.00060
34	13600	.00471	.00063
33	13200	.00408	.00047
32	12800	.00361	.00043
31	12400	.00318	.00033
30	12000	.00285	.00031
29	11600	.00254	.00032
28	11200	.00222	.00029
27	10800	.00193	.00024
26	10400	.00169	.00023
25	10000	.00146	.00018
24	9600	.00128	.00016
23	9200	.00112	.00019
22	8800	.00093	.00008
21	8400	.00085	.00012
20	8000	.00067	.00009
19	7600	.00058	.00010
18	7200	.00048	.00004
17	6800	.00044	.00007
16	6400	.00037	.00004
15	6000	.00033	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPF-4B
 SPECTRUM: Fighter
 TEST DATE: _____
 TEST FRAME: 1 2 3 ④ 5 6 ⑮
 ERAGE WIDTH: 1.5019 | 1.5018 | 1.5013 | 1.5020 | 1.5024
 ERAGE THICKNESS: .3816 | .3818 | .3800 | .3817 | .3820 | .3823
 EA: .5731 R CAL 18478
 SELINE STRESS: 30.6 KSC C.S 45.0%
 X. LOAD: 17535.8 AP 7.01
 CLES AT TERMINATION/FAILURE: 3 Lives/

②
 STATIC LOAD A-17.88 K#
 B-17.22 K#



2 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Continued from reverse page

FRACTOGRAPHIC DATA
LYWPF-3B

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
	60	24000	.05665	.00571
	59	23600	.05094	.00378
	58	23200	.04716	.00295
	57	22800	.04421	.00298
	56	22400	.04123	.00285
	55	22000	.03838	.00267
	54	21600	.03571	.239
	53	21200	.03332	.00219
	52	20800	.03113	.00177
	51	20400	.02936	.00198
	50	20000	.02738	.00148
	49	19600	.02590	.00230
	48	19200	.02360	.00225
	47	18800	.02135	.00202
	46	18400	.01933	.00193
	45	18000	.01740	.00177
	44	17600	.01563	.00168
	43	17200	.01395	.00131
	42	16800	.01264	.00136
	41	16400	.01128	.00112

FRACTOGRAPHIC DATA

LYWPF-4B

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
	60	24000	.01351	
	59	23600		
	58	23200		
	57	22800		
	56	22400		
	55	22000		
	54	21600		
	53	21200		
	52	20800		
	51	20400		
	50	20000		
	49	19600		
	48	19200		
	47	18800		
	46	18400		
	45	18000		
	44	17600		
	43	17200		
	42	16800		
	41	16400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPF-5A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

ERAGE WIDTH: 1.5007 1.5005 1.5006 1.5008 1.5009

ERAGE THICKNESS: .3795 .3797 .3780 .3803 .3797 .3797

EA: .5695 R, CAI 18652

SELINER STRESS: 30.6 KSI CAI 45.7

X. LOAD: 17426.3 AP 6.91

CLES AT TERMINATION/FAILURE: *

2 Lives/ _____

② 1,802,871 L.P.'s = 18835.16 FLT-HRS. *

STATIC LOAD A- K#

B- K#

ORIGIN LIES ON PLATE SURFACE WHICH
MATES WITH PLATE "B". INITIATION
WAS DUE TO FRETTING.

2 Lives

See
next
page

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	1.842	0.168
39	15600	1.674	0.176
38	15200	1.498	0.150
37	14800	1.348	0.144
36	14400	1.184	0.135
35	14000	1.049	0.139
34	13600	0.910	0.111
33	13200	0.799	0.087
32	12800	0.712	0.093
31	12400	0.614	0.077
30	12000	0.537	0.067
29	11600	0.470	0.056
28	11200	0.414	0.046
27	10800	0.368	0.042
26	10400	0.326	0.039
25	10000	0.287	0.037
24	9600	0.250	0.042
23	9200	0.208	0.038
22	8800	0.170	0.032
21	8400	0.138	0.022
20	8000	0.116	0.017
19	7600	0.099	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPF-6B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

ERAGE WIDTH: 1.5004 1.5003 1.4999 1.5000 1.5015

ERAGE THICKNESS: .3743 .3750 .3744 .3748 .3739 .3735

EA: .5616 R, CAI 18094

SELINER STRESS: 30.6 KSI C.S. 45.0

X. LOAD: 171859 AP 6.81

CLES AT TERMINATION/FAILURE: _____

3 Lives/ _____

② $\frac{a}{2c} = .53$

STATIC LOAD A-17.63 K#

B-17.58 K#

THIS ORIGIN LIES ON BOLT HOLE SURFACE

2 Lives

See
next
page

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Continued from previous page

FRACTOGRAPHIC DATA

LYWPF-5A

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
60	24000		
59	23600		
58	23200		
57	22800		
56	22400		
55	22000		
54	21600		
53	21200		
52	20800		
51	20400		
50	20000		
49	19600		
* → 48	19200	.4335	.0124
47	18800	.4151	.0712
46	18400	.3439	.0393
45	18000	.3046	.0284
44	17600	.2762	.0261
43	17200	.2501	.0236
42	16800	.2265	.0235
41	16400	.2030	.0180

FRACTOGRAPHIC DATA

LYWPF-6B

3 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
60	24000	.00991/20 =	.01275
59	23600		
58	23200		
57	22800		
56	22400		
55	22000		
54	21600		
53	21200		
52	20800		
51	20400		
50	20000		
49	19600		
48	19200		
47	18800		
46	18400		
45	18000		
44	17600		
43	17200		
42	16800		
41	16400		

(245)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: LYWPF-7B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: ① 2 3 4 5 6 88

ERAGE WIDTH: 1.5023 1.5020 1.5023 1.5023 1.5024

ERAGE THICKNESS: .3797 .3800 .3784 .3786 .3803 .3810

EA: .5704 R. CAL. 1875L
C.S. 4 45.8
A.P.T. 7.00

SELINE STRESS: 30.6 KSC

X. LOAD: 17453.1

1 Life

CLES AT TERMINATION/FAILURE:

3 Lives/ _____

②

STATIC LOAD A-15.94 K#
B-15.98 K#

ORIGIN LIES AT CORNER.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.01754	.00101
39	15600	.01633	.00098
38	15200	.01555	.00101
37	14800	.01454	.00088
36	14400	.01366	.00088
35	14000	.01278	.00066
34	13600	.01212	.00071
33	13200	.01141	.00074
32	12800	.01067	.00062
31	12400	.01005	
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: LYWPF-8B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 ② 3 4 5 6 89

ERAGE WIDTH: 1.5012 1.5030 1.5022 1.5012 1.5008

ERAGE THICKNESS: .3794 .3811 .3763 .3817 .3794 .3814

EA: .5638 R. CAL. 18627
C.S. 45.6
A.P.T. 6.57

SELINE STRESS: 30.6 KSC

X. LOAD: 17434.4

1 Life

CLES AT TERMINATION/FAILURE:

3 Lives/ _____

②

STATIC LOAD A-17.78 K#
B-16.20 K#

ORIGIN LIES ON CHAMFERED CORNER SURFACE.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.01244	.00106
39	15600	.01138	.00064
38	15200	.01074	.00101
37	14800	.00973	.00103
36	14400	.00870	.00083
35	14000	.00787	.00067
34	13600	.00720	.00062
33	13200	.00658	.00043
32	12800	.00625	.00052
31	12400	.00573	.00057
30	12000	.00522	.00074
29	11600	.00498	.00060
28	11200	.00388	.00046
27	10800	.00342	.00043
26	10400	.00299	.00034
25	10000	.00265	.00037
24	9600	.00228	.00039
23	9200	.00189	.00021
22	8800	.00168	
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Continued from previous page

FRACTOGRAPHIC DATA

LYWPF-7B

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
	60	24000	.07482	.00632
	59	23600	06850	.00562
	58	23200	06288	00446
	57	22800	05842	00370
	56	22400	05472	00360
	55	22000	05112	00358
	54	21600	04754	00329
	53	21200	04425	00336
	52	20800	04089	00336
	51	20400	03753	00209
	50	20000	03544	00176
	49	19600	03368	00217
	48	19200	03149	00219
	47	18800	02930	00176
	46	18400	02754	00146
	45	18000	02608	00261
	44	17600	02347	00218
	43	17200	02129	00151
	42	16800	01978	00139
	41	16400	01839	00085

FRACTOGRAPHIC DATA

LYWPF-8B

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I
	60	24000	.07009	.00469
	59	23600	06540	00490
	58	23200	06050	00470
	57	22800	05580	00395
	56	22400	05185	00398
	55	22000	04787	00425
	54	21600	04362	00260
	53	21200	04102	00304
	52	20800	03798	00295
	51	20400	03503	00217
	50	20000	03286	00369
	49	19600	02917	00279
	48	19200	02638	00205
	47	18800	02433	00208
	46	18400	02225	00219
	45	18000	02004	00202
	44	17600	01802	00129
	43	17200	01673	00203
	42	16800	01477	00097
	41	16400	01373	00129

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: LYWPF-9A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 ④ 5 6 ⑤

ERAGE WIDTH: 1.4999 1.4997 1.5003 1.5007 1.4995

ERAGE THICKNESS: .3826 .3840 .3813 .3825 .3828 .3823

EA: .5738 R CAL 18 MPa

SELIN STRESS: 30.6 KSI CS 450

X. LOAD: 17559.3 AP 702 1 Life

CLES AT TERMINATION/FAILURE:

3 Lives/

②

STATIC LOAD A-14.24 K#
B-16.33 K#

ORIGIN OCCURRED AT THE BASE -
THE SLIVER
OF A SLIVER. WHICH WAS GENERATED
DURING THE BREAKING (DEBURRING)
OF THE CORNER.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.03912	.00285
39	15600	.03627	.00288
38	15200	.03339	.00292
37	14800	.03047	.00267
36	14400	.02780	.00265
35	14000	.02515	.00270
34	13600	.02245	.00268
33	13200	.01977	.00244
32	12800	.01733	.00251
31	12400	.01482	.00162
30	12000	.01320	.00154
29	11600	.01166	.00144
28	11200	.01022	.00134
27	10800	.00888	.00091
26	10400	.00797	.00109
25	10000	.00688	.00080
24	9600	.00608	.00068
23	9200	.00540	.00047
22	8800	.00493	.00035
21	8400	.00458	.00036
20	8000	.00422	.00032
19	7600	.00390	.00024
18	7200	.00366	.00027
17	6800	.00339	.00022
16	6400	.00317	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: LYWPF-10B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 ⑥

ERAGE WIDTH: 1.4997 1.4999 1.4992 1.5007 1.5000

ERAGE THICKNESS: .3775 .3785 .3787 .3792 .3753 .3751

EA: .5661 R CAL 1800H

SELIN STRESS: 30.6 KSI CS 450

X. LOAD: 17321.9 AP 603 1 Life

CLES AT TERMINATION/FAILURE:

3 Lives/

②

STATIC LOAD A-17.72 K# $\sigma_c = .34$
B-18.12 K#

ORIGIN LIES ON BOLT HOLE SURFACE.
MATING SURFACES WERE MILLED.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Continued from previous page

FRACTOGRAPHIC DATA

LYWPF-9A

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I'
	60	24000	.14612	.00854
	59	23600	13758	00676
	58	23200	13082	00729
	57	22800	12353	00675
	56	22400	11678	00728
	55	22000	10950	00644
	54	21600	10206	00632
	53	21200	09674	00594
	52	20800	09080	00617
	51	20400	08463	00575
	50	20000	07878	00445
	49	19600	07443	00561
	48	19200	06882	00410
	47	18800	06472	00436
	46	18400	06036	00432
	45	18000	05604	00366
	44	17600	05238	00366
	43	17200	04872	00366
	42	16800	04506	00299
	41	16400	04207	00295

FRACTOGRAPHIC DATA

LYWPF-10B

3 Lives	Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT I'
	60	24000	.00328 / 20 =	.00958
	59	23600		
	58	23200		
	57	22800		
	56	22400		
	55	22000		
	54	21600		
	53	21200		
	52	20800		
	51	20400		
	50	20000		
	49	19600		
	48	19200		
	47	18800		
	46	18400		
	45	18000		
	44	17600		
	43	17200		
	42	16800		
	41	16400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-1A

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5005

AVERAGE THICKNESS: 332.1

AREA: .5784 R-Cal 1263 (79%)

BASELINE STRESS: 29.7 Ksi Cal S 47%

MAX. LOAD: 17,030 Apt 671

CYCLES AT FAILURE: * 3 Lives /

STATIC LOAD A- KN
B- KN

Origin lies on Plate A surface near corner on extrusion formed during drilling. Both plate surfaces (A+B) were milled. This specimen failed between 3340 & 3350 F.L.T's.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
*	4708	.1558
	3260	.0693
	3160	.0488
	3060	.0371
	2960	.0284
	2860	.0263
	2760	.0202
	2660	.0182
Two Lives	2560	.0078
	2480	.0103
	2380	.0083
	2280	.0065
	2180	.0060
	2080	.0057
	1980	.0048
	1880	.0025
	1780	.0018
	1680	.0017
	1580	.0010
	1480	.0012
	1380	.0017
One Life	1280	.0005
	1200	.0005
	1100	.0006
	1000	.0006
	900	.0004
	800	.0003
	700	.0003
	600	
	500	
	400	
	300	
	200	

TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-2B

SPECTRUM: Bomber

TEST DATE: AB C D E F

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5028 1.5034 1.5013 1.5028 1.5030

AVERAGE THICKNESS: 3334 3353 3318 3353 3317 3322

AREA: .5761 R-Cal 18034 (772%)

BASELINE STRESS: 29.7 Ksi Cal S 45.2%

MAX. LOAD: 17110 Apt 684

CYCLES AT FAILURE: * 3 Lives /

Not correct number of L.P.'s AT FAILURE @ 966657 L.P.s = 3749.01 F.L.T

Origin lies on Plate B surface near corner. This specimen failed at approx 3648 F.L.T's.

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	
*	4773	.1299
	3260	.0558
	3160	.0433
	3060	.0377
	2960	.0315
	2860	.0285
	2760	.0227
	2660	.0196
	2560	.0152
Two Lives	2480	.0133
	2380	.0087
	2280	.0060
	2180	.0059
	2080	.0035
	1980	.0035
	1880	.0027
	1780	.0028
	1680	.0024
	1580	.0020
	1480	.0021
	1380	.0012
One Life	1280	.0012
	1200	.0007
	1100	.0013
	1000	.0010
	900	.0009
	800	.0006
	700	.0006
	600	.0004
	500	.0004
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-3A
SPECTRUM: Bomber
TEST DATE: ABDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5001 1.5013 1.5016 1.5005 1.4992
AVERAGE THICKNESS: 3824 3805 3785 3811 3853 3856
AREA: .5739 R-Cal 18982 (8100)
BASELINE STRESS: 29.7 Ksi Cal S 48.1
MAX. LOAD: 17044 psi 6.82
CYCLES AT TERMINATION/FAILURE: 3 Lives /
(3)

15.16 in
15.4 in

Origin lies on Plate A surface
due to tool mark defects generated
by the relaxed tolerance in milling
similar to that in the factory production.
Both plates (A & B) were milled.

TAIHO ATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-4B
SPECTRUM: Bomber
TEST DATE: ABDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5003 1.5006 1.5004 1.5014 1.5015
AVERAGE THICKNESS: 3851 3862 3826 3844 3854 3827
AREA: .5780 R-Cal 18752 (7996)
BASELINE STRESS: 29.7 Ksi Cal S 47%
MAX. LOAD: 17107 psi 6.87
CYCLES AT TERMINATION/FAILURE: 3 Lives /
(3)

17.72 in
17.4 in

Origin lies on Plate B surface.
Both plates (A & B) were milled.

FRACROGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3810	.0138
	3760	.012
	3660	.0884
	3560	.0765
	3460	.0646
	3360	.0557
	3260	.0467
	3160	.0401
	3060	.0330
	2960	.0272
	2860	.0232
	2760	.0201
	2660	.0175
Two Lives	2560	.0153
	2480	.0142
	2380	.0134
	2280	.0123
	2180	.0120
	2080	.0115
	1980	.0109
	1880	.0104
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3810	.0252
	3760	.0220
	3660	.0186
	3560	.0162
	3460	.0138
	3360	.0119
	3260	.0101
	3160	.0086
	3060	.0078
	2960	.0067
	2860	.0057
	2760	.0051
	2660	.0038
Two Lives	2560	.0034
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-5A
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5021 1.5022 1.5025 1.5020 1.5017
AVERAGE THICKNESS: 3878 3874 3865 3865 3897 3897
AREA: .5825 R-L 18473 (3894)
BASELINE STRESS: 33 Ksi C-S 46%
MAX. LOAD: 17299
CYCLES AT TERMINATION/FAILURE: 31400

Interpolated $N = 7.40$ IFN
 $N = 13.74$ IFN

origin lies on Plate A surface near corner.

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-6B
SPECTRUM: Bomber
TEST DATE: ABCDEF
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5005 1.5009 1.5013 1.5000 1.4997
AVERAGE THICKNESS: 3832 3852 3874 3874 3834 3837
AREA: .5750 R-L 18478 (7894)
BASELINE STRESS: 33 Ksi C-S 46%
MAX. LOAD: 17078
CYCLES AT TERMINATION/FAILURE: 31400

(3) 891,819 L.P.s = 3458.77 FLS *
Interpolated $N = 11$ IFN

origin lies on Plate B surface but relaxed milling tolerances. Both plate surfaces (A & B) were milled.

FRACTOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0874
	3760	.0665
	3660	.0495
	3560	.0393
	3460	.0322
	3360	.0244
	3260	.0192
	3160	.0167
	3060	.0138
	2960	.0113
	2860	.0094
	2760	.0073
	2660	.0049
Two Lives	2560	.0033
	2480	.0032
	2380	.0030
	2280	.0023
	2180	.0019
	2080	.0016
	1980	.0013
	1880	.0012
	1780	.0011
	1680	.0009
	1580	.0009
	1480	.0009
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	
	3760	
	3660	
	3560	
	3460	.5253
	3360	.3755
	3260	.2987
	3160	.2507
	3060	.2132
	2960	.1778
	2860	.1467
	2760	.1222
	2660	.0986
Two Lives	2560	.0788
	2480	.0677
	2380	.0577
	2280	.0483
	2180	.0368
	2080	.0316
	1980	.0286
	1880	.0252
	1780	.0226
	1680	.0207
	1580	.0134
	1480	.0096
	1380	.0083
One Life	1280	.0075
	1200	.0070
	1100	.0062
	1000	.0055
	900	.0047
	800	.0041
	700	.0033
	600	.0028
	500	.0025
	400	.0021
	300	.0017
	200	

LOCAL DYNAMICS
Fast Fracture Division
TENSION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-7B

SPECTRUM: Bomber

TEST DATE:

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.4996 1.5007 1.5008 1.4987 1.4983

AVERAGE THICKNESS: 3842 3868 3814 3872 3823 3833

AREA: .5762 R-Cal 126.52 (7957)
29.7 Cal S 46%

BASELINE STRESS: 33 Ksi pit 684

MAX. LOAD: 17112

CYCLES AT TERMINATION/FAILURE: 3 Lives/

(3)

Interpolated N=18.25 in
N=17.3 in

Origin lies at corner. Both plate surfaces (A & B) were milled.

FRACTOGRAPHIC DATA

FLIGHT 3840	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840 .0326	.0035
	3760 .0291	.0047
	3660 .0244	.0041
	3560 .0203	.0032
	3460 .0171	.0026
	3360 .0145	.0015
	3260 .0130	.0013
	3160 .0116	.0013
	3060 .0103	.0011
	2960 .0092	.0006
	2860 .0086	.0005
	2760 .0071	.0005
	2660 .0073	
Two Lives	2560	
	2480	
	2380	
	2280	
	2180	
	2080	
	1980	
	1880	
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-8A

SPECTRUM: Bomber

TEST DATE:

TEST FRAME: A B C D E F
1 2 3 4 5 6

AVERAGE WIDTH: 1.5001 1.5003 1.5005 1.5009 1.4998

AVERAGE THICKNESS: 3824 3825 3821 3819 3820 3827

AREA: .5737 R-Cal 179.25 (7668)
29.7 Cal S 45%

BASELINE STRESS: 33 Ksi pit 482

MAX. LOAD: 17039

CYCLES AT TERMINATION/FAILURE: 3 Lives/

(3)

Interpolated N=27.00 in
N=25.660 in

Origin lies on tip of a extrusion caused by the drilling of the bolt hole. Both Plate surfaces (A & B) were milled.

(253)

FLIGHT <u>3840</u>	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	.0285
	3760	.0304
	3660	.0278
	3560	.0254
	3460	.0218
	3360	.0187
	3260	.0159
	3160	.0138
	3060	.0108
	2960	.0109
	2860	.0084
	2760	.0069
	2660	.0056
Two Lives	2560	.0038
	2480	.0032
	2380	.0029
	2280	.0029
	2180	.0025
	2080	.0022
	1980	.0014
	1880	.0015
	1780	.0010
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

GENERAL DYNAMICS
FATIGUE TEST DATA
FATIGUE TEST DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-9B
SPECTRUM: Bomber
TEST DATE: 1977
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.4990 1.4996 1.4999 1.4986 1.4980
AVERAGE THICKNESS: 3816 3845 3896 3933 3798 3784
AREA: 5720 297 Rid 18762 (7996)
BASELINE STRESS: 297 47%
MAX. LOAD: 16988
CYCLES AT TERMINATION/FAILURE: 31ives/

*Origin lies on Bolt Hole surface.
Both Plate surfaces (A & B) were milled.*

FATIGUE TEST DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: LYWPB-10B
SPECTRUM: Bomber
TEST DATE: 1977
TEST FRAME: 1 2 3 4 5 6
AVERAGE WIDTH: 1.5003 1.5005 1.5007 1.5020 1.5012
AVERAGE THICKNESS: 3832 3804 3824 3822 3855 3857
AREA: 5752 297 Rid 18004 (777)
BASELINE STRESS: 297 45%
MAX. LOAD: 17083
CYCLES AT TERMINATION/FAILURE: 31ives/

*Origin lies on Bolt Hole surface.
Both Plate surfaces (A & B) were milled.*

FRAC TOGRAPHIC DATA

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	0.0320
	3760	0.0274
	3660	0.0234
	3560	0.0187
	3460	0.0148
	3360	0.0122
	3260	0.0100
	3160	0.0082
	3060	0.0070
	2960	0.0054
	2860	0.0051
	2760	0.0044
	2660	0.0041
Two Lives	2560	0.0038
	2480	0.0037
	2380	0.0031
	2280	0.0024
	2180	0.0023
	2080	0.0020
	1980	0.0017
	1880	0.0014
	1790	0.0012
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

FLIGHT	CRACK LENGTH INCH	INCREMENT INCH
Three Lives	3840	0.0451
	3760	0.0361
	3660	0.0284
	3560	0.0209
	3460	0.0157
	3360	0.0122
	3260	0.0095
	3160	0.0075
	3060	0.0061
	2960	0.0051
	2860	0.0045
	2760	0.0038
	2660	0.0034
Two Lives	2560	0.0030
	2480	0.0028
	2380	0.0024
	2280	0.0021
	2180	0.0019
	2080	0.0017
	1980	0.0014
	1880	0.0012
	1780	
	1680	
	1580	
	1480	
	1380	
One Life	1280	
	1200	
	1100	
	1000	
	900	
	800	
	700	
	600	
	500	
	400	
	300	
	200	

2.3.7 XWIF
FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-1A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5018 1.5015 1.5020 1.5020 1.5018

AVERAGE THICKNESS: .3776 .3801 .3767 .3792 .3772 .3752

A RFA: 1.5670 RCAL 18625 (75%)

BASLINE STRESS: 34 KSC CALC 97%

MAX. LOAD: 19279 A.M.T. 771

CYCLES AT TERMINATION: 2 Lives/

2 Lives/

STATIC LOAD A-16.44 K-H
B-17.74 K-H

Origin lies on Plate surface.

FRAC TOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.1728	.0103
39	15600	.1625	.0141
38	15200	.1484	.0115
37	14800	.1369	.0103
36	14400	.1266	.0078
35	14000	.1188	.0076
34	13600	.1112	.0074
33	13200	.1038	.0065
32	12800	.0973	.0051
31	12400	.0922	.0053
30	12000	.0869	.0062
29	11600	.0807	.0059
28	11200	.0748	.0047
27	10800	.0701	.0040
26	10400	.0661	.0042
25	10000	.0619	.0045
24	9600	.0574	.0041
23	9200	.0533	.0042
22	8800	.0491	.0041
21	8400	.0450	.0033
20	8000	.0417	.0025
19	7600	.0392	.0038
18	7200	.0354	.0029
17	6800	.0325	.0030
16	6400	.0295	.0025
15	6000	.0270	.0030
14	5600	.0240	.0035
13	5200	.0205	.0028
12	4800	.0177	.0021
11	4400	.0156	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-2A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5008 1.5022 1.5015 1.5001 1.4993

AVERAGE THICKNESS: .3865 .3901 .3849 .3884 .3853 .3837

A RFA: .5820 RCAL 18610 (75%)

BASLINE STRESS: 34 KSC CALC 95%

MAX. LOAD: 19721 A.M.T. 789

CYCLES AT TERMINATION: 2 Lives/

2 Lives/

STATIC LOAD A-12.77 K-H
B-13.84 K-H

Origin lies on Bolt Hole Surface.
Both Plate surfaces (A & B) were
milled.

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0337	.0043
39	15600	.0294	.0027
38	15200	.0267	.0024
37	14800	.0243	.0024
36	14400	.0219	.0026
35	14000	.0193	.0018
34	13600	.0175	.0018
33	13200	.0157	.0019
32	12800	.0138	.0015
31	12400	.0123	.0012
30	12000	.0111	.0012
29	11600	.0099	.0011
28	11200	.0088	.0010
27	10800	.0078	.0008
26	10400	.0070	.0004
25	10000	.0066	.0006
24	9600	.0060	.0005
23	9200	.0055	.0004
22	8800	.0051	.0005
21	8400	.0048	.0006
20	8000	.0042	.0006
19	7600	.0039	.0004
18	7200	.0035	.0003
17	6800	.0032	.0004
16	6400	.0028	.0003
15	6000	.0025	.0003
14	5600	.0022	.0003
13	5200	.0019	.0002
12	4800	.0017	.0003
11	4400	.0014	.0002
10	4000	.0013	.0002
9	3600	.0010	.0001
8	3200	.0009	.0001
7	2800	.0008	.0001
6	2400	.0007	.0001
5	2000	.0006	.0001
4	1600	.0005	.0001
3	1200	.0004	.0001
2	800	.0002	
1	400		

255

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-3B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AV. RAGE WIDTH: 1.4993 1.4994 1.5002 1.5003

AVERAGE THICKNESS: 3773 3793 3775 3798 3759 3769

A RFA: 5657 2CAL 19146 (E160)

BASLINE STRESS: 34ksi CAL 99%

MAX. LOAD: 19233 A.M.T. 7.70

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/ @ 1,493,196 L.P.s = 15,599.89 FLT-HRS.

STATIC LOAD A- K-H
B- K-H

origin lies on Plate surface
"B" near corner upset burr.
Both plate surfaces (A & B) were
milled.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39		.4275	.1271
38	15200	.3067	.0470
37	14800	.2534	.0342
36	14400	.2192	.0286
35	14000	.1906	.0250
34	13600	.1656	.0221
33	13200	.1435	.0169
32	12800	.1266	.0136
31	12400	.1150	.0146
30	12000	.0984	.0114
29	11600	.0870	.0086
28	11200	.0784	.0078
27	10800	.0706	.0078
26	10400	.0628	.0068
25	10000	.0560	.0059
24	9600	.0501	.0061
23	9200	.0440	.0033
22	8800	.0407	.0043
21	8400	.0368	.0043
20	8000	.0316	.0051
19	7600	.0265	.0034
18	7200	.0231	.0036
17	6800	.0195	.0028
16	6400	.0167	.0027
15	6000	.0140	.0025
14	5600	.0115	.0022
13	5200	.0093	.0018
12	4800	.0075	.0012
11	4400	.0063	.0007
10	4000	.0056	.0009
9	3600	.0047	.0009
8	3200	.0038	.0006
7	2800	.0032	.0006
6	2400	.0028	.0005
5	2000	.0023	.0004
4	1600	.0019	
3	1200		
2	800		
1	760		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-4A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AV. RAGE WIDTH: 1.4990 1.4987 1.4993 1.4993 1.4998

AVERAGE THICKNESS: 3821 3861 3795 3831 3821 3798

A RFA: 5728 2CAL 19675 (791)

BASLINE STRESS: 34ksi CAL 96%

MAX. LOAD: 19475 A.M.T. 7.79

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/ @ 1,455,532 L.P.s = 15,206.4 FLT-HRS.

STATIC LOAD A- K-H
B- K-H

origin lies at corner. Both plate
surfaces (A & B) were milled.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39		.4203	.0004
38	15200	.4109	.0949
37	14800	.3250	.0380
36	14400	.2870	.0316
35	14000	.2554	.0244
34	13600	.2310	.0230
33	13200	.2080	.0209
32	12800	.1871	.0180
31	12400	.1691	.0158
30	12000	.1533	.0135
29	11600	.1398	.0129
28	11200	.1269	.0125
27	10800	.1149	.0096
26	10400	.1048	.0098
25	10000	.0950	.0082
24	9600	.0868	.0076
23	9200	.0792	.0080
22	8800	.0712	.0074
21	8400	.0638	.0057
20	8000	.0581	.0059
19	7600	.0522	.0037
18	7200	.0485	.0046
17	6800	.0439	.0040
16	6400	.0399	.0040
15	6000	.0359	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	760		

Fracture milled
on both

256

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-5A *

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.4988 1.4993 1.4976 1.4992 1.4999

AVERAGE THICKNESS: 1.3716 1.3764 1.3748 1.3802 1.37% 1.3789

A RFA: 5659 RECAL 18675 (70%)

BASLINE STRESS: _____ CALS 97%

MAX. LOAD: 19240 A.M.T. 770

CYCLES AT TERMINATION/FAILURE: *

@ 11404,686 L.P.s = 14675.20 FLT-HRS *

STATIC LOAD A- K-H

Origin lies on Bolt Hole Surface

FRACTOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200		
37	14800	.5756	.2139
36	14400	.3617	.0768
35	14000	.2849	.0407
34	13600	.2442	.0290
33	13200	.2152	.0214
32	12800	.1938	.0190
31	12400	.1749	.0196
30	12000	.1552	.0146
29	11600	.1406	.0147
28	11200	.1259	.0119
27	10800	.1140	.0097
26	10400	.1043	.0085
25	10000	.0958	.0076
24	9600	.0882	.0064
23	9200	.0818	.0066
22	8800	.0752	.0043
21	8400	.0694	.0052
20	8000	.0642	.0046
19	7600	.0596	.0049
18	7200	.0547	.0043
17	6800	.0504	.0049
16	6400	.0455	
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	700		

Fracture damaged by rubbing on itself

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-6A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5004 1.5003 1.5004 1.5005 1.5003

AVERAGE THICKNESS: 1.3814 1.3823 1.3809 1.3828 1.3800 1.3808

A RFA: 5722 RECAL 18670 (70%)

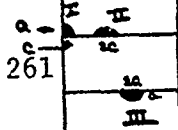
BASLINE STRESS: 34 KSI CALS 96%

MAX. LOAD: 19455 A.M.T. 778

CYCLES AT TERMINATION/FAILURE: ***

@ 760,461 L.P.s = 7944.78 FLT-HRS *

STATIC LOAD A-17.40 K-H
B-17.53 K-H
Computer put specimen in full compression - buckling it.
Fatigue crack size at approx. one life.



Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200	I .0095	.0355
37	14800	II .0099	.0113
36	14400	III .0049	.0112
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	700		

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FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-7A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5008 1.5009 1.5018 1.5005 1.5002

AVERAGE THICKNESS: .3766 .3797 .3769 .3763 .3753 .3750

A RFA: .565 REAL 191X (2100)

BASLINE STRESS: 34 KSI CALC 100%

MAX. LOAD: 19,219 A.M.T. 770

CYCLES AT TERMINATION/FAILURE: 2 Lives/

STATIC LOAD A-16.99 K4

B-16.95 K4

Origin lies on Bolt Hole surface.
Both Plates (A+B) were milled

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0169	.0006
39	15600	.0163	.0006
38	15200	.0157	.0008
37	14800	.0149	.0007
36	14400	.0142	.0006
35	14000	.0136	.0008
34	13600	.0128	.0008
33	13200	.0120	.0008
32	12800	.0112	.0007
31	12400	.0105	.0007
30	12000	.0098	.0007
29	11600	.0089	.0007
28	11200	.0082	.0007
27	10800	.0074	.0006
26	10400	.0068	.0007
25	10000	.0061	.0007
24	9600	.0054	.0006
23	9200	.0048	.0006
22	8800	.0042	.0006
21	8400	.0036	.0006
20	8000	.0030	.0005
19	7600	.0025	.0003
18	7200	.0022	.0003
17	6800	.0019	.0002
16	6400	.0017	.0002
15	6000	.0015	.0001
14	5600	.0014	.0001
13	5200	.0013	.0001
12	4800	.0012	.0001
11	4400	.0011	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	775		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-8A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5013 1.5016 1.5011 1.5010 1.5015

AVERAGE THICKNESS: .3804 .3796 .3802 .3802 .3810 .3811

A RFA: .5711 REAL B675 (700)

BASLINE STRESS: _____ CALC 96%

MAX. LOAD: 19418 A.M.T. 777

CYCLES AT TERMINATION/FAILURE: *

2 Lives/

@ 1458, 278 hrs - 15235.09 FLT-HRS*

STATIC LOAD A- K4

B- K4

Origin lies at corner.

3-9-78 9.41

add 3-10-78 11:50

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600	.3393	.0116
38	15200	.3277	.0567
37	14800	.2708	.0353
36	14400	.2355	.0270
35	14000	.2085	.0221
34	13600	.1864	.0214
33	13200	.1650	.0186
32	12800	.1464	.0127
31	12400	.1337	.0125
30	12000	.1212	.0110
29	11600	.1102	.0107
28	11200	.0995	.0092
27	10800	.0903	.0071
26	10400	.0832	.0070
25	10000	.0762	.0065
24	9600	.0697	.0067
23	9200	.0630	.0058
22	8800	.0572	.0038
21	8400	.0534	.0035
20	8000	.0499	.0041
19	7600	.0458	.0042
18	7200	.0416	.0044
17	6800	.0372	.0039
16	6400	.0333	.0025
15	6000	.0308	.0033
14	5600	.0275	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	775		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-9B

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5011 1.5016 1.5023 1.5006 1.5000

AVERAGE THICKNESS: .3823 .3915 .3826 .3812 .3805 .3755

A RFA: .5738 RCAL 18670 (7968)

BASLINE STRESS: 34 KSC CALC 96%

MAX. LOAD: 19510 A.M.T. 7.80

CYCLES AT ~~THICKENING~~/FAILURE: *

2 Lives/

@ 1,225,816 LRS = 12806.49 FLT-HRS *

STATIC LOAD A- K/H

B- K/H

Origin on Bolt Hole surface at corner.

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200	.4207	.0005
32	12800	.4202	.0970
31	12400	.3232	.0494
30	12000	.2738	.0386
29	11600	.2352	.0253
28	11200	.1999	.0327
27	10800	.1672	.0272
26	10400	.1400	.0228
25	10000	.1172	.0191
24	9600	.0981	.0159
23	9200	.0822	.0121
22	8800	.0701	.0097
21	8400	.0604	.0076
20	8000	.0508	.0081
19	7600	.0427	.0053
18	7200	.0374	.0055
17	6800	.0319	.0051
16	6400	.0268	.0043
15	6000	.0225	.0040
14	5600	.0185	.0031
13	5200	.0154	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-10A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5020 1.5025 1.5015 1.5016 1.5023

AVERAGE THICKNESS: .3834 .3827 .3808 .3814 .3863 .3856

A RFA: .5758 RCAL 19156 (8168)

BASLINE STRESS: 34 KSC CALC 96.7%

MAX. LOAD: 19517 A.M.T. 7.03

CYCLES AT ~~THICKENING~~/FAILURE: *

2 Lives/

@ 1,458,278 LRS = 15235.09 FLT-HRS *

STATIC LOAD A- K/H

B- K/H

Origin lies on Bolt Hole surface.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600	.4224	.0102
38	15200	.4122	.0813
37	14800	.3309	.0415
36	14400	.2894	.0330
35	14000	.2564	.0272
34	13600	.2292	.0273
33	13200	.2019	.0220
32	12800	.1799	.0184
31	12400	.1615	.0151
30	12000	.1464	.0150
29	11600	.1314	.0130
28	11200	.1184	.0115
27	10800	.1069	.0105
26	10400	.0964	.0093
25	10000	.0871	.0081
24	9600	.0790	.0065
23	9200	.0725	.0057
22	8800	.0668	.0057
21	8400	.0611	.0051
20	8000	.0560	.0045
19	7600	.0515	.0048
18	7200	.0467	.0049
17	6800	.0418	.0040
16	6400	.0378	.0046
15	6000	.0332	.0034
14	5600	.0298	.0029
13	5200	.0274	.0039
12	4800	.0252	.0036
11	4400	.0199	.0038
10	4000	.0161	
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-11A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.4992 1.4998 1.5005 1.4998 1.4977

AVERAGE THICKNESS: 3817 3794 3837 3792 3852 3862

A RFA: .5723 SCAL 18675 (77)

BASELINE STRESS: _____ CALS 96%

MAX. LOAD: 19458 A. KIT. 7.78

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A-12.40K4

B-12.40K4

Origin lies on Bolt Hole surface
near corner. Both Plate surfaces (A+B)
were milled.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.2095	.0311
39	15600	.1784	.0271
38	15200	.1513	.0208
37	14800	.1305	.0190
36	14400	.1115	.0157
35	14000	.0958	.0137
34	13600	.0821	.0100
33	13200	.0721	.0089
32	12800	.0632	.0091
31	12400	.0541	.0064
30	12000	.0477	.0056
29	11600	.0421	.0044
28	11200	.0377	.0043
27	10800	.0334	.0044
26	10400	.0290	.0030
25	10000	.0260	.0026
24	9600	.0234	.0026
23	9200	.0208	.0021
22	8800	.0187	.0019
21	8400	.0168	.0017
20	8000	.0157	.0014
19	7600	.0137	.0012
18	7200	.0122	.0012
17	6800	.0110	.0011
16	6400	.0099	.0011
15	6000	.0087	.0011
14	5600	.0077	.0010
13	5200	.0067	.0009
12	4800	.0057	.0009
11	4400	.0049	.0006
10	4000	.0043	.0008
9	3600	.0035	.0003
8	3200	.0032	
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XWIF-12A

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5011 1.5006 1.5003 1.5012 1.5012

AVERAGE THICKNESS: .5768 .3786 .3855 .3883 .3764 .3752

A RFA: .5056 SCAL 18675 (77)

BASELINE STRESS: _____ CALS 97%

MAX. LOAD: 19231 A. KIT. 7.69

CYCLES AT TERMINATION/FAILURE: 1302379 LPS

2 Lives/ _____

@ 1,302,379 LPS = 1360h.36 FLT-HRS.*

STATIC LOAD A- K4

B- K4

Origin lies at corner.

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000	.3949	.0033
34	13600	.3916	.1055
33	13200	.2861	.0422
32	12800	.2379	.0401
31	12400	.1978	.0308
30	12000	.1670	.0275
29	11600	.1395	.0225
28	11200	.1170	.0139
27	10800	.1031	.0143
26	10400	.0888	.0114
25	10000	.0774	.0086
24	9600	.0687	.0081
23	9200	.0607	.0069
22	8800	.0538	.0061
21	8400	.0477	.0061
20	8000	.0416	.0051
19	7600	.0365	.0042
18	7200	.0322	.0040
17	6800	.0282	.0035
16	6400	.0242	.0031
15	6000	.0211	.0031
14	5600	.0180	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: XW1F-13B

SPECIMEN: Fighter

TEST DATE: _____

TEST FRAME: C

AV. GAGE WIDTH: 1.5002 1.5002 1.5003 1.5001 1.5001

AV. GAGE THICKNESS: 3.807 3.805 3.805 3.808 3.802 3.813

AREA: 1.5711 REAL 19126 (2160)

BASELINE STRESS: 34 ksc CHL 5 09%

MAX. LOAD: 10416 APOT 7.77

CYCLES AT ~~FAILURE~~ FAILURE 1225812 LRS

2 Lives/

@ 1225812 LRS = 12806 A4 FLT-HRS *

STATIC LOAD A- K4
B- K11

origin lies at corner

FRACTOGRAPHIC DATA

BLK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200	.3844	.0049
32	12800	.3795	.1026
31	12400	.2769	.0596
30	12000	.2173	.0414
29	11600	.1759	.0349
28	11200	.1410	.0287
27	10800	.1122	.0196
26	10400	.0926	.0164
25	10000	.0762	.0123
24	9600	.0639	.0161
23	9200	.0588	.0085
22	8800	.0453	.0075
21	8400	.0388	.0040
20	8000	.0348	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

2.4 TASK IV
2.4.1 (AF-1410 Steel)
ST

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-1

SPECTRUM: Fighter AF-1410

TEST DATE: A

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.0006

AVERAGE THICKNESS: 2021 2021 2021

AREA: .2022 252 R CAL 18675

BASILINE STRESS: 148.4 ksc CAL SWING 62.3

MAX. LOAD: 30,000 # A POT 10.0

CYCLES AT FAILURE 1 Life

2 Lives/

@ 309,659 L.P.s = 3235.11 FLT-HRS *

STATIC LOAD A- K#

corner cracks B- K#

Both sides

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-2

SPECTRUM: Fighter AF-1410

TEST DATE: B

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.0022

AVERAGE THICKNESS: 2009 2010 2008

AREA: .2013 R CAL 18670

BASILINE STRESS: 149.0 ksc CAL SWING 62.2

MAX. LOAD: 30,000 A POT 10.0

CYCLES AT FAILURE 1 Life

2 Lives/

@ 345,205 L.P.s = 3606.465 FLT-HRS

STATIC LOAD A- K#

Failed @ 92% load - 1st cycle out of 95c region

Required load - 92%

corner cracks Both

sides

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400	a ₁	a ₂ Δa ₁ Δa ₂
10	4000		
9	3600	.2231	.2245 .1110 .1427
8	3200	.1061	.0818 .0410 .0273
7	2800	.0650	.0545 .0268 .0209
6	2400	.0382	.0336 .0159 .0131
5	2000	.0223	.0205 .0068 .0087
4	1600	.0155	.0118 .0060 .0041
3	1200	.0095	.0077
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200	a ₁	a ₂ Δa ₁ Δa ₂
12	4800		
11	4400		
10	4000	.2209	.2339 .1089 .1374
9	3600	.1120	.0965 .0395 .0385
8	3200	.0725	.0580 .0270 .0205
7	2800	.0455	.0375 .0130 .0115
6	2400	.0325	.0260 .0090 .0075
5	2000	.0235	.0185 .0070 .0055
4	1600	.0165	.0130 .0060 .0050
3	1200	.0105	.0080
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

STPF-3

SPECIMEN NUMBER: ST-3

SPECTRUM: Fighter

TEST DATE: 6/27/78

TEST FRAME: A

AVERAGE WIDTH: 1.0038

AVERAGE THICKNESS: 2236 2242 2231

AREA: .2244

R CAL 18675

BASLINE STRESS: 125 KSI

CAL SWING 66.60

MAX. LOAD: 28,050 #

A POT 9.85

1 Life

CYCLES AT FAILURE: *

@ 486,029 h.P.s = 5077.698 FLT-HRS *

STATIC LOAD

A- K#
B- K#

origin lies on
Bolt Hole surface



Rik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000	a ₁	a ₂ Δa ₁
14	5600		
13	5200	.2797	.0062 .1140
12	4800	.1657	.0719
11	4400	.0938	.0413
10	4000	.0525	.0218
9	3600	.0307	.0133
8	3200	.0174	.0074
7	2800	.0100	.0039
6	2400	.0061	.0025
5	2000	.0036	
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-4

SPECTRUM: Fighter

TEST DATE: 6/27/78

TEST FRAME: B

AVERAGE WIDTH: 1.0200

AVERAGE THICKNESS: 2049 2051 2048

AREA: .2089

R CAL 18670

BASLINE STRESS: 125 KSI

CAL SWING 71.5 *

MAX. LOAD: 26,112.5 #

A POT 8.7

1 Life

CYCLES AT FAILURE: *

@ 868,884 h.P.s = 9,077.505 FLT-HRS *

STATIC LOAD

A- K#
B- K#

origin a₁ lies on
Bolt Hole surface



Rik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400	a ₁	a ₂ Δa ₁
25	10000		
24	9600		
23	9200	.3292	.0435 .1479
22	8800	.1813	.0670
21	8400	.1143	.0485
20	8000	.0738	.0257
19	7600	.0487	.0157
18	7200	.0330	.0097
17	6800	.0233	.0077
16	6400	.0156	.0054
15	6000	.0100	.0038
14	5600	.0062	.0026
13	5200	.0036	.0013
12	4800	.0023	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRAC T O G R A P H I C D A T A

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-5

SPECTRUM: Fighter

TEST DATE: 6/27/78

TEST FRAME: C

AVERAGE WIDTH: 1.0224

AVERAGE THICKNESS: 2.116 2.128 *

AREA: .2122 R CAL 19136

BASILINE STRESS: 12.5 KSI CAL SWING 72.2

MAX. LOAD: 26,525# A POT 8.84 1 Life

CYCLES AT FAILURE / FAILURE: *

2 Lives/

@ 1,021,667 L.P.s = 10,673.68 FLT-HRS *

STATIC LOAD A- K#

B- A K#

origin (a₁) lies on Bolt Hole surface.
origin (a₂) starts from lower at corner



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600	a ₁	a ₂ a ₀₁ a ₀₂
28	11200		
27	10800	.2803	.3128 .1100 .2513
26	10400	.1703	.0615 .0603 .0160
25	10000	.1106	.0455 .0312 .0137
24	9600	.0778	.0328 .0209 .0054
23	9200	.0569	.0274 .0161 .0053
22	8800	.0408	.0221 .0114 .0029
21	8400	.0294	.0192 .0085 .0027
20	8000	.0209	.0164 .0073
19	7600	.0136	.0051
18	7200	.0085	.0038
17	6800	.0047	.0020
16	6400	.0037	.0011
15	6000	.0016	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-6

SPECTRUM: Fighter

TEST DATE: 6/28/78

TEST FRAME: A

AVERAGE WIDTH: .9739

AVERAGE THICKNESS: 1.981 1.986 1.976 *

AREA: .1929 R CAL 18675

BASILINE STRESS: 12.5 KSI CAL SWING 77.5

MAX. LOAD: 24,112.5# A POT 8.04 1 Life

CYCLES AT FAILURE / FAILURE: *

2 Lives/

@ 996,085 L.P.s = 10,406.41 FLT-HRS *

STATIC LOAD A- K#

B- A K#

origin (a₁) lies at corner. origin (a₂) lies on Bolt Hole surface



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400	a ₁	a ₂ a ₀₁ a ₀₂
30	12000		
29	11600		
28	11200		
27	10800	.2230	.1937 .0555 .0367
26	10400	.1675	.1571 .0735 .0709
25	10000	.0940	.0862 .0284 .0302
24	9600	.0656	.0560 .0159 .0195
23	9200	.0497	.0365 .0112 .0120
22	8800	.0385	.0245 .0083 .0070
21	8400	.0302	.0166 .0058 .0054
20	8000	.0244	.0112 .0050 .0045
19	7600	.0194	.0067 .0039 .0023
18	7200	.0155	.0044 .0028 .0015
17	6800	.0127	.0029 .0027 .0013
16	6400	.0100	.0016 .0026
15	6000	.0074	.0018
14	5600	.0067	.0014
13	5200	.0043	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-7

SPECTRUM: Fighter

TEST DATE: R

TEST FRAME: B

AVERAGE WIDTH: 1.0451

AVERAGE THICKNESS: 2.185 2.189 2.181

AREA: .2194 R CAL 18622

BASLINE STRESS: 125 KSI CAL SWING 68.1

MAX. LOAD: 27,425.0# A POT 9.14 1 Life

CYCLES AT TERMINATION: 2 Lives/

STATIC LOAD

A-41.25K4

B-K4

Origins a_1, a_2 lie at corner from burr.

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	a_1 0237 a_2 0248	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-8

SPECTRUM: Fighter

TEST DATE: 6/28/78

TEST FRAME: C

AVERAGE WIDTH: 1.0010

AVERAGE THICKNESS: 2.004 2.006 2.002

AREA: .2006 R CAL 19136

BASLINE STRESS: 125 KSI CAL SWING 76.3

MAX. LOAD: 25,075# A POT 8.36 1 Life

CYCLES AT FAILURE: *

2 Lives/

@ 1,264,097 L.P.S = 13,206.42 FLT-HRS *

STATIC LOAD

A-K4

B-K4

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800	a_1 a_2 a_{a1} a_{a2}	
36	14400		
35	14000		
34	13600	1203 2228 0336 0257	
33	13200	1867 1971 0335 0298	
32	12800	1032 1073 0366 0344	
31	12400	0666 0729 0704 0185	
30	12000	0462 0544 0124 0089	
29	11600	0338 0455 0086 0072	
28	11200	0252 0383 0065 0047	
27	10800	0187 0336 0069 0034	
26	10400	0138 0302 0037 0037	
25	10000	0101 0265 0029 0026	
24	9600	0072 0239 0024 0024	
23	9200	0048 0215 0018 0016	
22	8800	0030 0199 0019	
21	8400	0180	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

269

0265

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-9

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.0446 | 1.0446 | _____

AVERAGE THICKNESS: 2.170 | 2.178 | 2.168 | _____

AREA: .2266

R CAL 18675

BASILINE STRESS: 125 KSI

CAL SWING 65.9

MAX. LOAD: 28,325

A POT 9.44

CYCLES AT ~~FAILURE~~ / FAILURE: *

2 Lives/

@ 1,110,336 L.P.'s = 11,600.03 FLT-HRS *

STATIC LOAD

A-

K#

B-

K#

origin lies at
corner Specimen
Failed outside of
test area in
grip radius tangent

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.0474 | _____

AVERAGE THICKNESS: 2.201 | 2.205 | 2.197 | _____

AREA: .2305

R CAL 18675

BASILINE STRESS: 125 KSI

CAL SWING 64.8248

MAX. LOAD: 28,812.5

A POT 9.61

CYCLES AT ~~FAILURE~~ / FAILURE: *

2 Lives/

@ 1,266,848 L.P.'s = 13,235.16 FLT-HRS *

STATIC LOAD

A-

K#

B-

K#

Stopped at
59317 L.P.'s

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000	.0714	.0044
29	11600	.0670	.0141
28	11200	.0529	.0104
27	10800	.0425	.0086
26	10400	.0339	.0065
25	10000	.0274	.0040
24	9600	.0234	.0023
23	9200	.0211	.0025
22	8800	.0186	.0027
21	8400	.0164	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	a ₁	a ₂
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600	.2185	.2042
33	13200	.1388	.1327
32	12800	.0892	.0721
31	12400	.0655	.0487
30	12000	.0512	.0375
29	11600	.0413	.0310
28	11200	.0330	.0259
27	10800	.0282	.0226
26	10400	.0232	.0196
25	10000	.0196	.0174
24	9600	.0172	.0155
23	9200	.0144	.0138
22	8800	.0121	.0121
21	8400	.0103	.0096
20	8000	.0087	.0083
19	7600	.0074	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

270

2.66

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-11

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.0382

AVERAGE THICKNESS: 2230 2237 2224

AREA: .2315

R CAL 19136

BASILINE STRESS: 125 KSI

CAL SWING 66.1

MAX. LOAD: 28937.5

A POT 9.65

1 Life

CYCLES AT ~~FAILURE~~/FAILURE: *

2 Lives/

@ 1,110,944 L.P.s = 11,606.38 FLT-HRS *

STATIC LOAD

A- K4

B- K11

origin A, lies
at corner
origin A, lies
in Bolt Hole
surface

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200	a ₁	a ₂
37	14800		
36	14400		
35	14000	.2322	.2306
34	13600	.2468	.1081
33	13200	.1419	.0627
32	12800	.1046	.0419
31	12400	.0791	.0309
30	12000	.0589	.0226
29	11600	.0443	.0166
28	11200	.0330	.0121
27	10800	.0265	.0094
26	10400	.0234	.0074
25	10000	.0206	.0055
24	9600	.0184	.0047
23	9200	.0164	.0015
22	8800	.0149	
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-12

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.0050

AVERAGE THICKNESS: 2199 2196 2202

AREA: .2209

R CAL 18675

BASILINE STRESS: 125 KSI

CAL SWING 67.6

MAX. LOAD: 27612.5 #

A POT 9.204

1 Life

CYCLES AT ~~FAILURE~~/FAILURE: *

2 Lives/

@ 646,030 L.P.s = 6749.28 FLT-HRS *

STATIC LOAD

A- K4

B- K11

Origins start from
Bolt Hole Surface

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000	a ₁	a ₂
19	7600		
18	7200		
17	6800	.2605	.2875
16	6400	.1461	.0504
15	6000	.0978	.0332
14	5600	.0690	.0201
13	5200	.0478	.0120
12	4800	.0340	.0078
11	4400	.0236	.0046
10	4000	.0158	.0030
9	3600	.0098	.0033
8	3200	.0065	.0021
7	2800	.0044	.0017
6	2400	.0027	
5	2000		
4	1600		
3	1200		
2	800		

271

(1267)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-13

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: BA

AVERAGE WIDTH: 1.0453

AVERAGE THICKNESS: 2203 2198 2209

AREA: .2302 R CAL 18676 1875

BASLINE STRESS: 125 Ksi CAL SWING 6.4

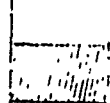
MAX. LOAD: 28775 # A POT 9.59 1 Life

CYCLES AT ~~TERMINATION~~/FAILURE: *

@ 907,252 L.P.s. 2 Lives/
9,478.35 FLT-HRS *

STATIC LOAD A- K# B
B- A K#

origins lie at
corner from
Burr.



RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800	a ₁	a ₂ Δa ₁ Δa ₂
26	10400		
25	10000		
24	9600	2225	2554 0899 .1569
23	9200	1326	0985 0940 0366
22	8800	0826	0619 0230 0146
21	8400	0656	0473 0155 0093
20	8000	0501	0380 0111 0072
19	7600	0390	0308 0077 0041
18	7200	0313	0267 0062 0031
17	6800	0251	0236 0042 0031
16	6400	0209	0205 0036 0027
15	6000	0173	0178 0023 0027
14	5600	0150	0151 0021 0017
13	5200	0129	0134 0019
12	4800	0110	0010
11	4400	0100	
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-14

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.0272

AVERAGE THICKNESS: 2182 2179 2185

AREA: .2241 R CAL 17925

BASLINE STRESS: 125 Ksi CAL SWING 6.4

MAX. LOAD: 28012.5 # A POT 9.34 1 Life

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A- 2425 K# B
B- A K#

origins a₁ & a₂ lie
at corner starting from
Burr.



RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.1596	.1658 0474 0495
39	15600	1123	1163 0351 0359
38	15200	0871	0804 0177 0100
37	14800	0694	0704 0127 0136
36	14400	0567	0568 0087 0141
35	14000	0480	0427 0071 0065
34	13600	0409	0362 0064 0065
33	13200	0345	0397 0049 0050
32	12800	0296	0247 0037 0050
31	12400	0259	0197 0033 0035
30	12000	0226	0162 0025 0033
29	11600	0201	0139 0020 0021
28	11200	0181	0108 0019
27	10800	0163	
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-15

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.0469

AVERAGE THICKNESS: 2177 2170 2184

AREA: .2279 R CAL 18675

BASELINE STRESS: 125 KSI CAL SWING 65.6

MAX. LOAD: 28487.5 # A POT 950 1 Life

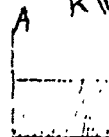
CYCLES AT FAILURE /FAILURE: *

2 Lives/

@ 1,075,406 LPS = 11,235.11 FLT-HRS *

STATIC LOAD A- K4 B- K11

origins lie at corners.



FRACTOGRAPHIC DATA

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800	a ₁	a ₂ aa ₁ aa ₂
31	12400		
30	12000		
29	11600	.2327	.2506 .0550 .1483
28	11200	.1777	.1023 .0595 .0402
27	10800	.1187	.0621 .0307 .0184
26	10400	.0875	.0437 .0317 .0100
25	10000	.0658	.0337 .0145 .0067
24	9600	.0513	.0270 .0111 .0063
23	9200	.0402	.0207 .0084 .0049
22	8800	.0318	.0158 .0050 .0032
21	8400	.0268	.0126 .0026 .0022
20	8000	.0242	.0104 .0023
19	7600	.0220	
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-17

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.063

AVERAGE THICKNESS: 2171 2173 2169

AREA: .2250 R CAL 18670 *

BASELINE STRESS: 125 KSI CAL SWING 66.4%

MAX. LOAD: 28,122.6 # A POT 938 1 Life

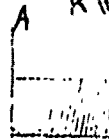
CYCLES AT FAILURE /FAILURE: *

2 Lives/

@ 919,507 LPS = 9606.38 FLT-HRS *

STATIC LOAD A- K4 B- K11

origins a₁ & a₂ lie at corner from Burr



RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	a ₁	a ₂ aa ₁ aa ₂
27	10800		
26	10400		
25	10000	.2666	.0420 .0076 .0009
24	9600	.2590	.0411 .0089 .0193
23	9200	.1541	.0216 .0045 .0034
22	8800	.1096	.0132 .0060 .0038
21	8400	.0836	.0094 .0172 .0029
20	8000	.0659	.0065 .0143
19	7600	.0516	.0056 .0119
18	7200	.0397	.0030 .0080
17	6800	.0317	.0057
16	6400	.0260	.0056
15	6000	.0200	.0048
14	5600	.0156	.0033
13	5200	.0123	.0030
12	4800	.0093	
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRAC T U R G R A P H I C D A T A

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 57-19

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.111

AVERAGE THICKNESS: 2202 2198 2206

AREA: 2292 R CAL 18675

BASELINE STRESS: 125 KSI CAL SWING 65.2

MAX. LOAD: 28650 # A POT 9.55 1 Life

CYCLES AT ~~FAILURE~~ / FAILURE: *

2 Lives/

@ 957,803 h.P.s = 10,006.47 FLT-HRS *

STATIC LOAD

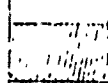
A-

K4

B-

K11

origin a₁ & a₂ lie at corners.



Mik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600	a ₁	a ₂ a ₀₁ a ₀₂
28	11200		
27	10800		
26	10400	.2580	.2607 .0232 .1032
25	10000	.2348	.1575 .1042 .0781
24	9600	.1306	.0794 .0444 .0257
23	9200	.0860	.0537 .0262 .0149
22	8800	.0598	.0388 .0181 .0092
21	8400	.0417	.0296 .0132 .0075
20	8000	.0285	.0221 .0077 .0057
19	7600	.0208	.0164 .0048 .0047
18	7200	.0160	.0117 .0038 .0027
17	6800	.0122	.0090 .0027
16	6400	.0095	.0018
15	6000	.0067	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 57-20 *

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.039

AVERAGE THICKNESS: 2212 2217 2208

AREA: 2300 R CAL 18670

BASELINE STRESS: 125 KSI CAL SWING 64.9

MAX. LOAD: 28750 # A POT 9.58 1 Life

CYCLES AT ~~FAILURE~~ / FAILURE: *

2 Lives/

@ 1,404,289 h.P.s = 14,670.05 FLT-HRS *

STATIC LOAD

A-

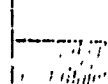
K4

B-

K11

origin a₁ lies at corner.

origin a₂ lies on Bolt hole surface.



Mik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800	.3033	.2334 .1484 .1275
36	14400	.1549	.1059 .0501 .0394
35	14000	.1048	.0665 .0262 .0201
34	13600	.0786	.0464 .0182 .0137
33	13200	.0604	.0327 .0133 .0093
32	12800	.0471	.0234 .0103 .0068
31	12400	.0367	.0166 .0070 .0048
30	12000	.0298	.0118 .0062 .0023
29	11600	.0236	.0085 .0043 .0021
28	11200	.0193	.0064 .0030 .0015
27	10800	.0163	.0049 .0024
26	10400	.0139	.0019
25	10000	.0120	
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACROGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-21

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.0425

AVERAGE THICKNESS: 2.133 2.133 2.133

AREA: .2223 R CAL 18675

BASLINE STRESS: 125 KSI CAL SWING 67.22

MAX. LOAD: 27787.5# A POT 9.26 1 Life

CYCLES AT FAILURE: *

2 Lives/

@ 676,460 LPS = 7067.19 FLT-HRS *

STATIC LOAD A- K4 B

Origin a₁ lies on
Both Hole Surfaces
Origin a₂ lies at
corner.

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-22

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.0400

AVERAGE THICKNESS: 2.122 2.122 2.122

AREA: .2206 R CAL 18670

BASLINE STRESS: 125 KSI CAL SWING 67.72

MAX. LOAD: 27575.0# A POT 9.19 1 Life

CYCLES AT FAILURE: *

2 Lives/

@ 1,110,944 LPS = 11,606.38 FLT-HRS *

STATIC LOAD A- K4 B

Origin a₁ & a₂
lie at corner

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600	a ₁	a ₂ Δa ₁ Δa ₂
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200	.3277	.2403 .1241 .1893
17	6800	.2036	.0510 .0727 .0217
16	6400	.1309	.0293 .0464 .0108
15	6000	.0845	.0185 .0290 .0050
14	5600	.0555	.0135 .0179 .0041
13	5200	.0376	.0094 .0118 .0024
12	4800	.0258	.0070 .0092 .0018
11	4400	.0166	.0052 .0058
10	4000	.0182	.0036
9	3600	.0072	.0028
8	3200	.0044	.0023
7	2800	.0021	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200	a ₁	a ₂ Δa ₁ Δa ₂
32	12800		
31	12400		
30	12000	.2813	.0436 .0291 .0024
29	11600	.2522	.0412 .0873 .0157
28	11200	.1649	.0255 .0467 .0071
27	10800	.1182	.0184 .0311 .0043
26	10400	.0871	.0141 .0193 .0021
25	10000	.0678	.0120 .0143 .0019
24	9600	.0535	.0101 .0117 .0014
23	9200	.0418	.0087 .0088 .0014
22	8800	.0330	.0073 .0075 .0014
21	8400	.0256	.0061 .0055
20	8000	.0200	.0041
19	7600	.0159	.0033
18	7200	.0126	.0029
17	6800	.0097	.0024
16	6400	.0071	.0023
15	6000	.0048	
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 5T-23

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: * C

AVERAGE WIDTH: 1.04/5

AVERAGE THICKNESS: 2272 2277 2268

AREA: 2366 R CAL 18675 *

BASLINE STRESS: 125 KSI CAL SWING 63.2

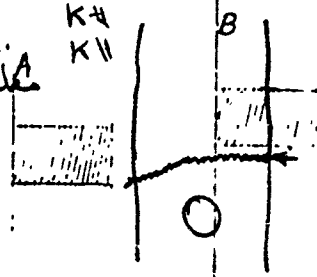
MAX. LOAD: 295750 # A POT 9.86 1 Life

CYCLES AT FAILURE / FAILURE: *

2 Lives/

@ 935,495 LPS = 9773.41 FT-HRS

STATIC LOAD A- K# B
origin lies at spec.
edge due to tool marks
& slide



Rik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: 5T-24

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.0390

AVERAGE THICKNESS: 2110 2117 2104

AREA: 2192 R CAL 18670

BASLINE STRESS: 125 KSI CAL SWING 68.12 *

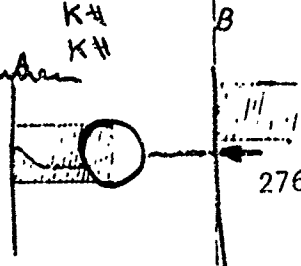
MAX. LOAD: 27400 # A POT 9.13 1 Life

CYCLES AT FAILURE / FAILURE: *

2 Lives/

@ 809,346 LPS = 8455.49 FT-HRS *

STATIC LOAD A- K# B
B- K#
origin lies on specimen
edge across from
hole (arrow)



Rik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

(672)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-25SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: _____

AVERAGE WIDTH: 1.0345AVERAGE THICKNESS: 2.097 2.098 2.096AREA: 2.169R CAL 8670BASELINE STRESS: 125 KSICAL SWING 68.9MAX. LOAD: 27112.5A POT 9.04 *CYCLES AT FAILURE: *

2 Lives/

@ 813,866 L.P.S. = 8502.72 FLT-HRS *

STATIC LOAD

A-

K4

FAILURE OCCURRED B-
AT GRIP END IN 1"
RADIUS/TEST SECTION
TANGENT POINT.

A

K11

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-26SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: AAVERAGE WIDTH: 1.0312AVERAGE THICKNESS: 2.207 2.208 2.206AREA: 2.276R CAL 8675 *BASELINE STRESS: 125 KSICAL SWING 65.6MAX. LOAD: 28450.4A POT 9.48 *CYCLES AT FAILURE: *

2 Lives/

@ 922,258 L.P.S. = 9,635.12 FLT-HRS *

STATIC LOAD

A-

K4

origins a, a₂ lie
on Bolt Hole surface.

A

K11

Rik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Rik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-27SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: CAVERAGE WIDTH: 1.0310AVERAGE THICKNESS: 2154 2155 2152AREA: 2221R CAL 18670BASELINE STRESS: 125 KSICAL SWING 67.3 *MAX. LOAD: 27762.5 #A POT 925

1 Life

CYCLES AT FAILURE *

2 Lives/

@842,939 L.P.s = 8806.45 FLT-HRS *

STATIC LOAD

A- K4

B- K11

origin A, lies on
Bolt Hole surface
origin A₂ lies at
corner.

N

FRACTOGRAPHIC DATA

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800	A ₁	A ₂ ΔA ₁
26	10400		
25	10000		
24	9600		
23	9200	.2981	.018A .0569
22	8800	.2412	.1239
21	8400	.1173	.0482
20	8000	.0691	.0273
19	7600	.0418	.0146
18	7200	.0272	.0096
17	6800	.0176	.0064
16	6400	.0112	.0039
15	6000	.0073	.0026
14	5600	.0047	.0021
13	5200	.0026	
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-28SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: AAVERAGE WIDTH: 1.0304AVERAGE THICKNESS: 2248 2250 2247AREA: 22316R CAL 18675BASELINE STRESS: 125 KSICAL SWING 64.5 *MAX. LOAD: 28,950 #A POT 9.65

1 Life

CYCLES AT FAILURE *

2 Lives/

@875,337 L.P.s = 9,144.92 FLT-HRS *

STATIC LOAD

A- K4

B- K11

origin A, lies on
Bolt Hole surface
origin A₂ lies at
corner.

278

RIK #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800	A ₁	A ₂ ΔA ₁ ΔA ₂
26	10400		
25	10000		
24	9600		
23	9200	.3261	.3198 .2612 .2244
22	8800	.0649	.0954 .0314 .0350
21	8400	.0335	.0604 .0125 .0187
20	8000	.0210	.0417 .0069 .0101
19	7600	.0141	.0316 .0037 .0084
18	7200	.0104	.0232 .0023 .0041
17	6800	.0081	.0191 .0015 .0030
16	6400	.0066	.0161 .0012 .0023
15	6000	.0054	.0139 .0008 .0020
14	5600	.0046	.0119
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-29

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.0331

AVERAGE THICKNESS: 2236 2238 2235 *

AREA: .2310

R CAL 18670

BASLINE STRESS: 125 ksi

CAL SWING 64.7

MAX. LOAD: 28875 #

A POT 9.63 1 Life

CYCLES AT FAILURE: *

2 Lives/

@ 1,022,052 L.P.s = 10,677.699 FLT-HRS *

STATIC LOAD

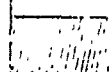
A-

K#

B-

K#

original a, & a₂
lie at corner



FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400	a ₁	a ₂ Δa ₁
30	12000		
29	11600		
28	11200		
27	10800	.3528	.0461 .1978
26	10400	.1550	.0584
25	10000	.0966	.0293
24	9600	.0673	.0226
23	9200	.0447	.0120
22	8800	.0327	.0093
21	8400	.0234	.0056
20	8000	.0178	.0043
19	7600	.0135	.0027
18	7200	.0108	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: ST-30

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: _____

AVERAGE WIDTH: 1.0251

AVERAGE THICKNESS: 2210 2208 2212

AREA: .2265

R CAL 18675

BASLINE STRESS: 125 ksi

CAL SWING 66.2

MAX. LOAD: 28312.5 #

A POT 9.44 1 Life

CYCLES AT FAILURE: *

2 Lives/

@ 607,688 L.P.s = 6348.71 *

STATIC LOAD

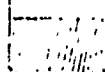
A-

K#

B-

K#

original a, & a₂
lie on Both Hole
Surface.



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600	a ₁	a ₂ Δa ₁
18	7200		
17	6800		
16	6400	.3002	.0457 .1760
15	6000	.1242	.0518
14	5600	.0724	.0323
13	5200	.0401	.0171
12	4800	.0231	.0105
11	4400	.0126	.0052
10	4000	.0074	.0023
9	3600	.0051	.0018
8	3200	.0033	.0012
7	2800	.0021	
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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(275)

2.4.2 Ti
(Titanium;
6Al-4V)

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TX-1

SPECTRUM: Fighter

TEST DATE: A

TEST FRAME: A

AVERAGE WIDTH: 1.3768

AVERAGE THICKNESS: 2504 2503 2504

AREA: .3447

R CAL 18675

BASELINE STRESS: 82.5 Ksi

CAL SWING 65.72

MAX. LOAD: 28,486.3

A POT 9.48

1 Life

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/

@ 957,198 LPS - 10,000.15 FLT. HRS *

STATIC LOAD

A- K#
B- K#



FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TX-2

SPECTRUM: Fighter

TEST DATE: C

TEST FRAME: C

AVERAGE WIDTH: 1.3760

AVERAGE THICKNESS: 2502 2501 2502

AREA: .3442

R CAL 19136

BASELINE STRESS: 82.5 Ksi

CAL SWING 67.42

MAX. LOAD: 28,396.5

A POT 9.47

1 Life

CYCLES AT TERMINATION/

2 Lives/

STATIC LOAD

A- 45.0 K#
B- K#



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FRAC TOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400	.3923	.0168
25	10000	.3755	.0484
24	9600	.1271	.0479
23	9200	.0792	.0315
22	8800	.0477	.0161
21	8400	.0316	.0093
20	8000	.0223	.0061
19	7600	.0162	.0036
18	7200	.0136	.0022
17	6800	.0104	.0017
16	6400	.0087	.0014
15	6000	.0073	.0013
14	5600	.0060	
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0022	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

TYPE - 3² Lives
 SPECIMEN NUMBER: ~~TX-3~~ TX-3
 SPECTRUM: Fighter
 TEST DATE: A
 TEST FRAME: 1 2 3 4 5 6
 AVERAGE WIDTH: 1.3766
 AVERAGE THICKNESS: 2508 2504 2511
 AREA: .3453 R CAL 18675
 BASELINE STRESS: 82.5 Ksi CAL SWING 65.6
 MAX. LOAD: 28,483.2# A POT 9.49 1 Life
 CYCLES AT TERMINATION/FAILURE: 2 Lives/

STATIC LOAD

A-4485K#
 B-K#



B



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0035	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

TYPE - 4 2 Lives
 SPECIMEN NUMBER: TX 4
 SPECTRUM: Fighter
 TEST DATE: 5-31-78
 TEST FRAME: C
 AVERAGE WIDTH: 1.3757
 AVERAGE THICKNESS: 2505 2505 2506
 AREA: .3446 R CAL 19136
 BASELINE STRESS: 82.5 Ksi CAL SWING 67.32
 MAX. LOAD: 28,429.5# A POT 9.48 1 Life
 CYCLES AT FAILURE: *

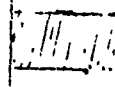
STATIC LOAD

A-K#
 B-K#

CORNER CRACK



B



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	.3450	.1496
27	10800	.1954	.0707
26	10400	.1347	.0283
25	10000	.0964	.0219
24	9600	.0745	.0125
23	9200	.0620	.0092
22	8800	.0528	.0074
21	8400	.0454	.0061
20	8000	.0393	.0056
19	7600	.0337	.0049
18	7200	.0288	
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: ~~TX-5~~ ^{TXPC} TX-5
 SPECTRUM: Fighter
 TEST DATE: B
 TEST FRAME: 1 2 3 4 5 6
 AVERAGE WIDTH: 1.3762
 AVERAGE THICKNESS: 2474, 2478, 2470
 AREA: ~~3.3405~~ 3.3405 R CAL 18670
 BASELINE STRESS: 82.5 KSC CAL SWING 66.5
 MAX. LOAD: 28,089.0 # A POT 9.36 1 Life
 CYCLES AT TERMINATION/ ~~2 Lives/~~

STATIC LOAD

A-41.8 K#
B-A K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	.0035	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: ~~TX-6~~ ^{TXPF} TX-6
 SPECTRUM: Fighter
 TEST DATE: C
 TEST FRAME: 1 2 3 4 5 6
 AVERAGE WIDTH: 1.3769
 AVERAGE THICKNESS: 2510, 2505, 2515
 AREA: ~~3.3456~~ 3.3456 R CAL 19136
 BASELINE STRESS: 82.5 KSC CAL SWING 67.1
 MAX. LOAD: 28512.2 # A POT 9.5 1 Life
 CYCLES AT ~~FAILURE~~ *

STATIC LOAD

A-K#
B-A K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	.4326	.2520
39	15600	.1806	.0690
38	15200	.1116	.0339
37	14800	.0777	.0249
36	14400	.0529	.0143
35	14000	.0386	.0085
34	13600	.0301	.0073
33	13200	.0228	.0053
32	12800	.0175	.0049
31	12400	.0126	.0029
30	12000	.0097	.0019
29	11600	.0078	.0019
28	11200	.0059	
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRAC TOG R A P H I C D A T A

FATIGUE TEST DATA

TXPF

2 Lives

SPECIMEN NUMBER: TX-7

SPECTRUM: Fighter

TEST DATE:

TEST FRAME:

1 2 3 4 5 6

AVERAGE WIDTH: 1.376

AVERAGE THICKNESS: 2499

2500 2498

AREA: 13437

R CAL 18670

BASELINE STRESS: 82.5 KSI

CAL SWING 66%

MAX. LOAD: 28369

A POT

1 Life

CYCLES AT TERMINATION/

2 Lives/

STATIC LOAD

A-37.1 K#
B- A K#

FATIGUE TEST DATA

TXPF

2 Lives

SPECIMEN NUMBER: TX-8

SPECTRUM: Fighter

TEST DATE:

TEST FRAME:

1 2 3 4 5 6

AVERAGE WIDTH: 1.374

AVERAGE THICKNESS: 2501

2512 2503

AREA: 13447

R CAL 19130

BASELINE STRESS: 82.5 KSI

CAL SWING 67%

MAX. LOAD: 28436

A POT

1 Life

CYCLES AT TERMINATION/FAILURE: *

2 Lives/

@ 1,290,124 L.P.s = 13,478.33 FLT-HRS *

STATIC LOAD

A- K#
B- A K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	.0578	.0094
39	15600	.0484	.0068
38	15200	.0420	.0055
37	14800	.0365	.0043
36	14400	.0322	.0029
35	14000	.0293	
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600	.4134	.2807
33	13200	.1327	.0666
32	12800	.0661	.0191
31	12400	.0470	.0124
30	12000	.0346	.0061
29	11600	.0283	.0050
28	11200	.0235	.0041
27	10800	.0194	.0040
26	10400	.0154	.0033
25	10000	.0121	.0017
24	9600	.0104	
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

283

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FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER:

TX-9 T1-6-4(MA)

SPECTRUM: Fighter

TEST DATE:

TEST FRAME:

1 2 3 4 5 6

AVERAGE WIDTH:

1.3754

AVERAGE THICKNESS:

2493 2483 2502

AREA: .3428

R CAL 19136

BASELINE STRESS: 82.5 KSI

CAL SWING 67.7

MAX. LOAD: 28,281#

A POT 9.43

1 Life

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD

A-43.0 K#
B- A K#

B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0037	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER:

TX 10

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: A

AVERAGE WIDTH: 1.3771

AVERAGE THICKNESS:

2498 2503 2492

AREA: .3439

R CAL 18675

BASELINE STRESS: 82.5 KSI

CAL SWING 66%

MAX. LOAD: 28,374

A POT 9.46

1 Life

CYCLES AT TERMINATION/FAILURE: *

2 Lives/

@ 1,417,245 LPS - 14,806.40 * FLT. HRS

STATIC LOAD

A- K#
B- A K#

B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200	.4773	.1457
37	14800	.3316	.2303
36	14400	.1613	.0394
35	14000	.0619	.0131
34	13600	.0488	.0118
33	13200	.0370	.0096
32	12800	.0274	.0049
31	12400	.0225	.0037
30	12000	.0188	.0035
29	11600	.0153	
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TX 11

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.3760

AVERAGE THICKNESS: 2487 2490 2484

AREA: .3422 R CAL 18670

BASILINE STRESS: 82.5 KSI CAL SWING 66%

MAX. LOAD: 28,232 A POT 9.41 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-39.0 K#
B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0169	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TX-12

SPECTRUM: Fighter

TEST DATE: A

TEST FRAME: _____

AVERAGE WIDTH: 1.3767

AVERAGE THICKNESS: 2494 2491 2498 *

AREA: .3433 R CAL 18675

BASILINE STRESS: 82.5 KSI CAL SWING 65.9

MAX. LOAD: 28,322.3 # A POT 9.44 1 Life

CYCLES AT FAILURE *

2 Lives/ _____

@ 1,037,124 LRS = 10835.16 FLT. HRS *

STATIC LOAD

A- K#
B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	.2903	.1584
27	10800	.1319	.0787
26	10400	.0532	.0221
25	10000	.0311	.0090
24	9600	.0221	.0051
23	9200	.0170	.0036
22	8800	.0134	.0018
21	8400	.0116	
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

285

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FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TX-13

SPECTRUM: Fighter

TEST DATE: B

TEST FRAME: B

AVERAGE WIDTH: 1.3763

AVERAGE THICKNESS: 2516 2511 2521

AREA: .3462

R CAL 18670

BASILINE STRESS: 82.5 KSI

CAL SWING 65.4

MAX. LOAD: 28561.5

A POT 9.52

CYCLES AT FAILURE: *

2 Lives/

@ 1,149,241 L.P.s = 12,006.48 FLT-HRS *

STATIC LOAD

A- K#

B- K#

@ 86.5% load
avg 92%



Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400	.2821	.0941
30	12000	.1880	.0892
29	11600	.0988	.0310
28	11200	.0678	.0163
27	10800	.0575	.0090
26	10400	.0485	.0047
25	10000	.0438	.0047
24	9600	.0390	
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TX-14

SPECTRUM: Fighter

TEST DATE: B

TEST FRAME: B

AVERAGE WIDTH: 1.3767

AVERAGE THICKNESS: 2503 2505 2500

AREA: .3445

R CAL 18670

BASILINE STRESS: 82.5 KSI

CAL SWING 65.7%

MAX. LOAD: 28,421.3

A POT 9.47

CYCLES AT FAILURE: *

2 Lives/

@ 1,225,832 L.P.s = 12806.65 FLT-HRS *

STATIC LOAD

A- K#

B- K#



Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200	.3450	.1932
32	12800	.1518	.0950
31	12400	.0568	.0213
30	12000	.0355	.0140
29	11600	.0215	.0088
28	11200	.0127	.0048
27	10800	.0079	.0037
26	10400	.0047	.0022
25	10000	.0030	
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER:

TX-15

SPECTRUM: Fighter

TEST DATE:

TEST FRAME:

AVERAGE WIDTH:

1.3744

AVERAGE THICKNESS:

2498 2490 2506

AREA:

.3433

R CAL 19136

BASELINE STRESS:

82.5 KSI

CAL SWING 67.6

MAX. LOAD:

28,322.3 #

A POT 9.44

1 Life

CYCLES AT FAILURE:

2 Lives/

@ 1302396 LPS = 13606.54 FLT-HRS *

STATIC LOAD

A- K#
B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000	.1961	.0263
34	13600	.1698	.0261
33	13200	.0897	.0323
32	12800	.0574	.0177
31	12400	.0347	.0083
30	12000	.0314	.0044
29	11600	.0270	.0035
28	11200	.0235	
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER:

Ty-2

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: B

AVERAGE WIDTH:

1.3788

AVERAGE THICKNESS:

2501 2499 2503

AREA:

.3448

R CAL 18670

BASELINE STRESS:

82.5 KSI

CAL SWING 65.62

MAX. LOAD:

28,446.0 #

A POT 9.48

1 Life

CYCLES AT FAILURE:

2 Lives/

@ 574,929 LPS = 6006.46 FLT-HRS *

STATIC LOAD

During 92% Load A- K#
B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400	.3579	.1208
15	6000	.2371	.1259
14	5600	.0912	.0473
13	5200	.0441	.0162
12	4800	.0289	.0105
11	4400	.0184	.0052
10	4000	.0132	.0030
9	3600	.0102	
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

TY-3

SPECIMEN NUMBER:

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.3753

RAGE THICKNESS: 2504 2508 2504

A: 13447 R CAL 19136

ELINE STRESS: 75 KSI CAL SWING 75.7

LOAD: 25853 A POT CAL 2 11.50

LES AT TERMINATION:

2 Lives/1531494 L.P.C

TATIC LOAD A-43.4 K#

B- K#

no cracks!

FRA TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0000	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY4

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.3755

AVERAGE THICKNESS: 2505 2507 2502

AREA: 13445 R CAL 19136

BASLINE STRESS: 85 KSI CAL SWING 65.7

MAX. LOAD: 20782 A POT 95.0 1 Life

CYCLES AT FAILURE: *

2 Lives/1531494 L.P.C

@ 1481520 L.P.C = 15467.46 FLT-HRS *

STATIC LOAD A- K#
B- K#
60% load out of
68%



283

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600	.3458	.2197
38	15200	.1420	.0664
37	14800	.0806	.0359
36	14400	.0447	.0174
35	14000	.0273	.0100
34	13600	.0173	.0045
33	13200	.0128	
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY5

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.3771

AVERAGE THICKNESS: 2499 2496 2503

AREA: 5.4421

R CAL

BASLINE STRESS: 20KSI

CAL SWING 69%

MAX. LOAD: 27536

A POT 97

1 Life

CYCLES AT TERMINATION/FAILURE:

2 Lives/1,531,494

STATIC LOAD

A-41.75K#

B- K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY-6

SPECTRUM: Fighter

TEST DATE: B

TEST FRAME: _____

AVERAGE WIDTH: 1.3773

AVERAGE THICKNESS: 2499 2498 2501

AREA: .3441

R CAL 18676

BASLINE STRESS: 82.5 KSI

CAL SWING 65.8

MAX. LOAD: 28,388.3 #

A POT 94.6

1 Life

CYCLES AT TERMINATION/FAILURE: *

2 Lives/

@ 1,513,992 LRS = 12,035.22 FT. HRS *

STATIC LOAD

A- K#

B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0091	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400	.3455	.1836
30	12000	.1809	.0769
29	11600	.1040	.0413
28	11200	.0627	.0248
27	10800	.0379	.0156
26	10400	.0223	.0061
25	10000	.0162	.0049
24	9600	.0113	
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

289

1285

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY-7

SPECTRUM: Fighter

TEST DATE: A

TEST FRAME: A

AVERAGE WIDTH: 1.3760

AVERAGE THICKNESS: 2508 2509 2507

AREA: .3451

R CAL 18675

BASELINE STRESS: 82.5 Ksi

CAL SWING 65.6

MAX. LOAD: 28470.75 #

A POT 9.49

CYCLES AT FAILURE: *

2 Lives/

@ 1,034,406 LP's = 10,806.77 * FLT-HRS

STATIC LOAD

A- K#

B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	.3540	.1952
27	10800	.1598	.0775
26	10400	.0823	.0307
25	10000	.0516	.0182
24	9600	.0334	.0099
23	9200	.0235	
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY 8

SPECTRUM: Fighter

TEST DATE: A

TEST FRAME: A

AVERAGE WIDTH: 1.3773

AVERAGE THICKNESS: 2506 2500 2512

AREA: .3452

R CAL 18675

BASELINE STRESS: 66%

CAL SWING 66%

MAX. LOAD: 28475

A POT

1 Life

CYCLES AT FAILURE: *

2 Lives/

@ 1,493,824 LP's = 15,606.45 * FLT-HRS

STATIC LOAD

A- K#

B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.2917	.0733
39	15600	.2184	.1355
38	15200	.0829	.0389
37	14800	.0440	.0138
36	14400	.0302	.0099
35	14000	.0203	.0069
34	13600	.0134	.0038
33	13200	.0096	
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

290

(286)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: **TY-9**

SPECTRUM: Fighter

TEST DATE: C

TEST FRAME:

AVERAGE WIDTH: 1.3724

AVERAGE THICKNESS: 2492 2486 2498

AREA: .3420 R CAL 19136

BASILINE STRESS: 82.5 ksci CAL SWING 678

MAX. LOAD: 28,215.0 # A POT 9.41 1 Life

CYCLES AT TERMINATION:

2 Lives/

STATIC LOAD

A-39.95K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0173	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: **TY-10**

SPECTRUM: Fighter

TEST DATE: B

TEST FRAME:

AVERAGE WIDTH: 1.3785 *

AVERAGE THICKNESS: 2487 2488 2486

AREA: .3428 R CAL 18670

BASILINE STRESS: 82.5 ksci CAL SWING 66

MAX. LOAD: 28,281.0 # A POT 9.43 1 Life

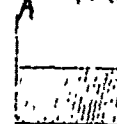
CYCLES AT ~~TERMINATION~~ FAILURE: *

2 Lives/

@ 1,105,319 L.P.S. = 11,547.62 FLT-HRS *

STATIC LOAD

A- K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600	.5466	.2975
28	11200	2.491	13.49
27	10800	1.142	0.594
26	10400	0.548	0.193
25	10000	0.355	0.129
24	9600	0.226	0.075
23	9200	0.151	0.057
22	8800	0.094	0.034
21	8400	0.070	0.028
20	8000	0.042	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

291

(287)

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY-11

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.3775

AVERAGE THICKNESS: 2503 2503 2503

AREA: .3448

R CAL 18675

BASILINE STRESS: 82.5 ksi

CAL SWING 65.7

MAX. LOAD: 28445.03

A POT 9.48

CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/

@ 1,043,637 LPS = 10,903.20 FLT-HRS *

STATIC LOAD

A-

K#

During 82.5 LPS

B-

K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY-12

SPECTRUM: Fighter

TEST DATE: 25 May 1978

TEST FRAME: _____

AVERAGE WIDTH: 1.3761

AVERAGE THICKNESS: 2510 2515 2505

AREA: .3454

R CAL 19136

BASILINE STRESS: 82.5 ksi

CAL SWING 67.2

MAX. LOAD: 28,495.5 #

A POT 9.5

CYCLES AT TERMINATION/

2 Lives/

STATIC LOAD

A-24.0 K#

B-

K#

FRACROGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	.3514	.2704
27	10800	.0810	.0413
26	10400	.0397	.0133
25	10000	.0264	.0075
24	9600	.0189	.0047
23	9200	.0147	.0021
22	8800	.0126	.0025
21	8400	.0101	.0017
20	8000	.0084	
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.2428	.1138
39	15600	.1290	.0430
38	15200	.0860	.0326
37	14800	.0534	.0155
36	14400	.0379	.0076
35	14000	.0303	.0072
34	13600	.0231	
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY-13SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: AAVERAGE WIDTH: 1.3755AVERAGE THICKNESS: 2504 2498 2500AREA: .3444

R CAL 18675

BASELINE STRESS: 82.5 KSI CAL SWING 65.72MAX. LOAD: 28413.0 # A POT 9.47CYCLES AT ~~TERMINATION~~/FAILURE: *

2 Lives/

@ 1,034,393 L.P. = 10,806.43 FLT. HRS *

STATIC LOAD

A- K#B- K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TY-14SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: BAVERAGE WIDTH: 1.3773AVERAGE THICKNESS: 2507 2498 2516AREA: .3452

R CAL 18670

BASELINE STRESS: 82.5 KSI CAL SWING 65.62MAX. LOAD: 28479.0 # A POT 9.49CYCLES AT TERMINATION/~~FAILURE~~: _____

2 Lives/

STATIC LOAD

A- 41.3 K#B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200	.2063	.0258
27	10800	.1805	.0451
26	10400	.0254	.0277
25	10000	.0577	.0233
24	9600	.0354	.0119
23	9200	.0235	.0057
22	8800	.0178	
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	.0109	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

289

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER:

Ty-15

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH:

1.3764

AVERAGE THICKNESS:

2489/2490/2488

AREA:

.3425

R CAL 19136

BASLINE STRESS:

82.5 KSI

CAL SWING 67.7%

MAX. LOAD:

28256.3 *

A POT 9.42

1 Life

CYCLES AT

FAILURE *
2 Lives/

① 1,424,840 L.P.s = 15,303.65 FLT-HRS *

STATIC LOAD

A-

K#

B-

K#



B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15200	.3630	.2157
38	14800	.1473	.0648
37	14400	.0825	.0359
36	14000	.0466	.0147
35	13600	.0319	.0088
34	13200	.0231	.0069
33	12800	.0162	.0047
32	12400	.0115	.0031
31	12000	.0089	
30	11600		
29	11200		
28	10800		
27	10400		
26	10000		
25	9600		
24	9200		
23	8800		
22	8400		
21	8000		
20	7600		
19	7200		
18	6800		
17	6400		
16	6000		
15	5600		
14	5200		
13	4800		
12	4400		
11	4000		
10	3600		
9	3200		
8	2800		
7	2400		
6	2000		
5	1600		
4	1200		
3	800		
2			

2.5 TASK V
2.5.1 CW
(Cold Worked Holes) **FATIGUE TEST DATA**

SPECIMEN NUMBER: CW-1

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5014

AVERAGE THICKNESS: 3677 3659 3694

AREA: .5520 REAL 18752

BASILINE STRESS: 38 KSI CALS 90%

MAX. LOAD: 20976 A.POT. 840

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-29.25K#
B- K#



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0162 / .2600</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW11

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.508

AVERAGE THICKNESS: 3772 3769 3775

AREA: .5507 REAL 18670 (77900)

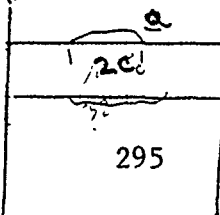
BASILINE STRESS: _____ CALS 97%

MAX. LOAD: 19268 A.POT. 771

CYCLES AT TERMINATION/FAILURE:

6 Lives/

STATIC LOAD A-32.4 K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0162 / .1290</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(29)

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-12

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5026

AVERAGE THICKNESS: .3742 .3742

A RFA: .5623 RCAL 10670 (7960)

BASELINE STRESS: 34 Ksi CALS 98%

MAX. LOAD: 19117 A.POT. 765

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-32.3 K#

B- K#

2.0297

61.76

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-2

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5045

AVERAGE THICKNESS: .3719 .3721 .3716

A RFA: .5594 RCAL 18675

BASELINE STRESS: 34 Ksi CALS 98%

MAX. LOAD: 19021 A.POT. 761

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-31.3 K#

B- K#

296

FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>a</u> <u>2c</u> <u>.045</u> <u>.0371</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>a</u> <u>1c</u> <u>.0231</u> <u>.0983</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(272)

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-3

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5033

AVERAGE THICKNESS: 3704 3681 3719

A REA: .5567 RCAL 18670

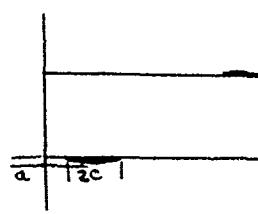
BASELINE STRESS: 34ksi CALS 98%

MAX. LOAD: 18929 A.POT. 757

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-31.9 K#
B- K#



FATIGUE TEST DATA

SPECIMEN NUMBER: CW4

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 0

AVERAGE WIDTH: 1.5041

AVERAGE THICKNESS: 3747 3743 3772

A REA: .5629 RCAL 2263 (9670)

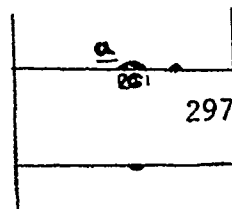
BASELINE STRESS: 34ksi CALS 51% (609)

MAX. LOAD: 19139 A.POT. 766

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A- K#
B- K#



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>0092</u> / <u>0850</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>0063</u> / <u>0195</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-5

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.4988

AVERAGE THICKNESS: .3761 .3766 .3756

A RFA: .5637 REAL 18675 (777)

BASELINE STRESS: 34K CALS 97%

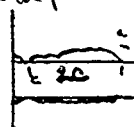
MAX. LOAD: 19166 A.POT. 767

CYCLES AT TERMINATION/FAILURE:

6 Lives/

STATIC LOAD A-29.6 K#
B- K#

Underage Bolt Hole. Bolt was driven into Bolt Hole as per De Moronha's request.



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0329</u> <u>1.3172</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-6

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: e

AVERAGE WIDTH: 1.4991

AVERAGE THICKNESS: .3732 .3736 .3727

A RFA: .5594 REAL 18620

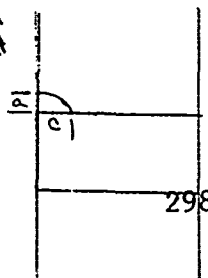
BASELINE STRESS: 34 ksi CALS 95%

MAX. LOAD: 19019 A.POT. 761

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-32.4 K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.021</u> <u>1.0567</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-7

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.4992

AVERAGE THICKNESS: 3765 13765 13764

AREA: 5644

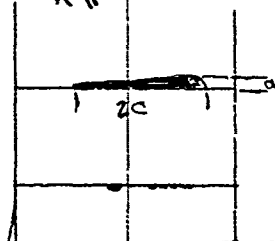
BASELINE STRESS: 34

MAX. LOAD: 10188

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A- KH
B- KH



FRACIOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>a</u> / <u>2c</u>	
39	15600	<u>0.145</u> / <u>1.2282</u>	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW8

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5037

AVERAGE THICKNESS: 3769 13771 13767

AREA: 5667

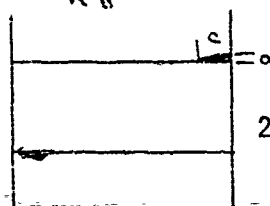
BASELINE STRESS: _____

MAX. LOAD: 19269

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A- 32.1 KH
B- KH



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>a</u> / <u>c</u>	
39	15600	<u>0.148</u> / <u>0.582</u>	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-9

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: _____

AVERAGE WIDTH: 1.5023

AVERAGE THICKNESS: .3774 .3781 .3867

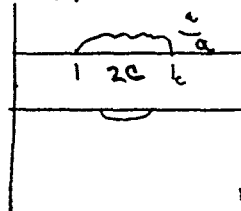
AREA: .5069 RCAL 18670

BASILINE STRESS: _____ CALS 974

MAX. LOAD: 19277 A.PCT. 771

CYCLES AT TERMINATION/FAILURE:
2 Lives/ _____

STATIC LOAD A-30.9 K#
B- K#



FATIGUE TEST DATA

SPECIMEN NUMBER: CW 10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.4994

AVERAGE THICKNESS: .3733 .3733 .3732

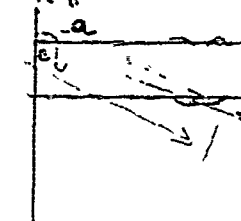
AREA: .5397 RCAL 18675 (111)

BASILINE STRESS: _____ CALS 987

MAX. LOAD: 19028 A.PCT. 761

CYCLES AT TERMINATION/FAILURE:
2 Lives/ _____

STATIC LOAD A-31.8 K#
B- K#



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0272 / .1995	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0175 / .0872	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

296

FATIGUE TEST DATA

SPECIMEN NUMBER: CW 13

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5055

AVERAGE THICKNESS: 3752 3754 3750

AREA: .5648 REAL 18675

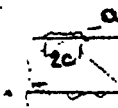
BASLINE STRESS: 10205 341K CALS 97%

MAX. LOAD: 19205 A.POT. 768

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-31.3 K#
B- K#



FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0457</u> <u>.1012</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-14

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5009

AVERAGE THICKNESS: 3763 3745 3781

AREA: .5646 REAL 19136 (8100)

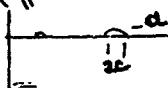
BASLINE STRESS: _____ CALS 100%

MAX. LOAD: 19196 A.POT. 768

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-32.0 K#
B- K#



301

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0138</u> <u>.0286</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

297

FATIGUE TEST DATA

SPECIMEN NUMBER: CW 15

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 2

AVERAGE WIDTH: 1.5004

AVERAGE THICKNESS: .3759 .3771 .3748

A RFA: .5041

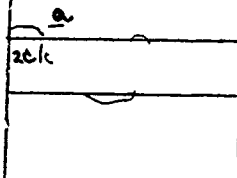
BASLINE STRESS: 34K

MAX. LOAD: 19179

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD A-31.9 K#
B- K#



FATIGUE TEST DATA

SPECIMEN NUMBER: CW 16

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 3

AVERAGE WIDTH: 1.5005

AVERAGE THICKNESS: .3763 .3731 .3770

A RFA: .5046

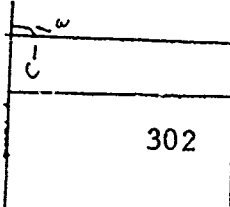
BASLINE STRESS: 34Ksi

MAX. LOAD: 19198

CYCLES AT TERMINATION/FAILURE:

2 Lives/ _____

STATIC LOAD A-32.4 K#
B- K#



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0215 / .0789	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	.0153 / .0615	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

278

FATIGUE TEST DATA

SPECIMEN NUMBER: CW 17

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 6

AVERAGE WIDTH: 1.5014

AVERAGE THICKNESS: 3760 3755 3765

AREA: .5645 REAL 19136 (2160)

BASELINE STRESS: 34 Ks CALS 99%

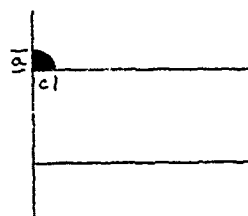
MAX. LOAD: 19194 A.P.T. 768

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-32.0 K#

B- K#



FRACTOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0278</u> <u>.0454</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW 18

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5022

AVERAGE THICKNESS: 3799 3772 3746

AREA: .5047 REAL 18075 (722)

BASELINE STRESS: 34 Ks CALS 97%

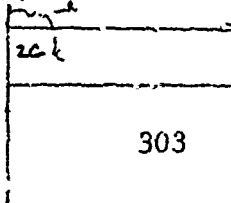
MAX. LOAD: 19200 A.P.T. 768

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-32.8 K#

B- K#



Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0157</u> <u>.0440</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(349)

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: CW-19 P103

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.5031

RAGE THICKNESS: .3719

A: .5590 R-CAL. _____

ELINE STRESS: 34ksi CAL-S _____

LOAD: 19006 # Apot _____

LES AT TERMINATION/_____:

6 Lives/

STATIC LOAD A-288 K#
B- K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0054	0006
39	15600	0047	0005
38	15200	0043	0005
37	14800	0038	0003
36	14400	0035	0004
35	14000	0031	0003
34	13600	0028	0002
33	13200	0026	0002
32	12800	0024	0002
31	12400	0021	0002
30	12000	0019	0002
29	11600	0017	0003
28	11200	0014	0002
27	10800	0012	
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

1 Life

FATIGUE TEST DATA

4 Lives

SPECIMEN NUMBER: CW-19 P203

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: _____

RAGE THICKNESS: _____

A: _____ R-CAL. _____

ELINE STRESS: _____ CAL-S _____

LOAD: _____ Apot _____

LES AT TERMINATION/_____:

6 Lives/

STATIC LOAD A- K#
B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0348	0006
39	15600	0342	0005
38	15200	0337	0005
37	14800	0332	0004
36	14400	0328	0004
35	14000	0324	0006
34	13600	0318	0005
33	13200	0313	0005
32	12800	0307	0005
31	12400	0303	0005
30	12000	0298	0006
29	11600	0292	0006
28	11200	0286	0006
27	10800	0280	0007
26	10400	0273	0007
25	10000	0266	0005
24	9600	0261	0007
23	9200	0254	0006
22	8800	0248	0006
21	8400	0242	0008
20	8000	0234	0008
19	7600	0226	0005
18	7200	0221	0009
17	6800	0212	0009
16	6400	0203	0008
15	6000	0195	0011
14	5600	0184	0007
13	5200	0177	0009
12	4800	0168	0009
11	4400	0159	0012
10	4000	0147	0013
9	3600	0134	0016
8	3200	0124	0011
7	2800	0113	0012
6	2400	0101	0010
5	2000	0091	0009
4	1600	0081	0007
3	1200	0074	0006
2	800	0068	0008
1	400	0060	0006

3 Life

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-19 P323

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AGE WIDTH: _____

AGE THICKNESS: _____

1: _____ R-CAL. _____

ILINE STRESS: _____ CAL-S _____

LOAD: _____ Apot _____

ES AT TERMINATION/FAILURE: _____

Lives/ _____

STATIC LOAD A- K#
B- K#

6 Lives

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	0.475	0.003
39	15600	0.472	0.004
38	15200	0.467	0.003
37	14800	0.465	0.003
36	14400	0.462	0.003
35	14000	0.459	0.003
34	13600	0.456	0.003
33	13200	0.453	0.003
32	12800	0.450	0.002
31	12400	0.448	0.003
30	12000	0.445	0.002
29	11600	0.443	0.004
28	11200	0.439	0.002
27	10800	0.437	0.003
26	10400	0.434	0.003
25	10000	0.431	0.002
24	9600	0.429	0.003
23	9200	0.426	0.002
22	8800	0.424	0.003
21	8400	0.421	0.002
20	8000	0.419	0.003
19	7600	0.416	0.004
18	7200	0.412	0.002
17	6800	0.410	0.004
16	6400	0.406	0.005
15	6000	0.401	0.005
14	5600	0.399	0.004
13	5200	0.395	0.002
12	4800	0.393	0.003
11	4400	0.390	0.005
10	4000	0.387	0.004
9	3600	0.383	0.003
8	3200	0.380	0.003
7	2800	0.377	0.004
6	2400	0.373	0.004
5	2000	0.369	0.004
4	1600	0.365	0.004
3	1200	0.361	0.005
2	800	0.356	0.005
1	400	0.351	0.003

FATIGUE TEST DATA

SPECIMEN NUMBER: CW 20

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5022

AVERAGE THICKNESS: 0.745 0.723 0.757

AREA: 0.5624 R-CAL 18670 (7960)

BASLINE STRESS: _____ CAL-S 98%

MAX. LOAD: 19128 A.P.T. 705

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/ _____

STATIC LOAD A-31.6 K#
B- K#

2 / 2C

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	0.60 / 0.381	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

305

301

FATIGUE TEST DATA

SPECIMEN NUMBER: CW21

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5022

AVERAGE THICKNESS: .3755 .3760 .3750

AREA: .5641 RCAL 19136 (2100)

BASELINE STRESS: CALS 100%

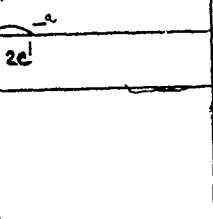
MAX. LOAD: 19179 A.POT. 7.70

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-32.5 K#

B- K#



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.023</u> <u>.0732</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-22

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5012

AVERAGE THICKNESS: .3767 .3760 .3764

AREA: .5655 RCAL 19136 (2100)

BASELINE STRESS: CALS 100%

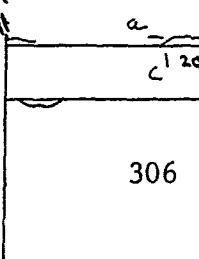
MAX. LOAD: 19227 A.POT. 7.69

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-32.0 K#

B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.0194</u> <u>.0834</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-23

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.4558

AVERAGE THICKNESS: .3753 .3753 .3753

AREA: .5576 REAL 10675

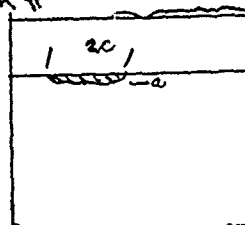
BASELINE STRESS: CALS 99%

MAX. LOAD: 18959 A.POT. 758

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-30.5 K#
B- K#



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>.052</u> <u>1.282</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-24

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: D

AVERAGE WIDTH: 1.5010

AVERAGE THICKNESS: .3753 .3752 .3754

AREA: .5033 REAL 22673 (24.1)

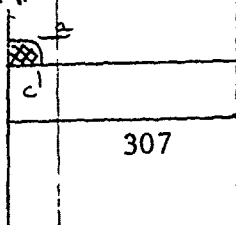
BASELINE STRESS: CALS 51% (51.1)

MAX. LOAD: 19153 A.POT. 7.46

CYCLES AT TERMINATION/FAILURE:

2 Lives/

STATIC LOAD A-32.8 K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>1.0424</u> <u>1.0321</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW 25

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: _____

AVERAGE WIDTH: 1.5023

AVERAGE THICKNESS: 13759 3772 3745

A RFA: .5646 RCAL 18675 (70%)

BASELINE STRESS: 34KSC CALS 97%

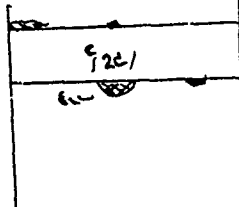
MAX. LOAD: 19198 A.POT. 768

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-32.0 K#

B- K#



FATIGUE TEST DATA

SPECIMEN NUMBER: CW 26

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5023

AVERAGE THICKNESS: 3748 3735 3760

A RFA: .5630 RCAL 18670 (70%)

BASELINE STRESS: _____ CALS 98%

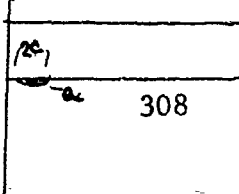
MAX. LOAD: 19142 A.POT. 766

CYCLES AT TERMINATION/FAILURE:

2 Lives/_____

STATIC LOAD A-33.0 K#

B- K#



FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>a</u> <u>2c</u> <u>.0143</u> <u>1.2505</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>a</u> <u>2c</u> <u>.0291</u> <u>1.2358</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-27

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5036

AVERAGE THICKNESS: .3769 .3771 .3766

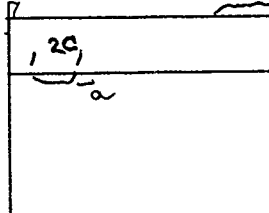
AREA: 5666 RCAL 191X (214)

BASLINE STRESS: _____ CALS 99%

MAX. LOAD: 19265 A.POT. 7.71

CYCLES AT TERMINATION/FAILURE:
2 Lives/ _____

STATIC LOAD A-32.2 K#
B- K#



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>1.0166</u> <u>1.0563</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-28

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5028

AVERAGE THICKNESS: .3744 .3769 .3718

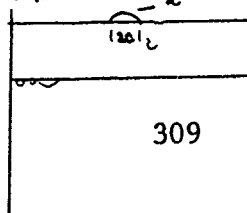
AREA: 5626 RCAL 18020

BASLINE STRESS: _____ CALS 99%

MAX. LOAD: 19127 A.POT. 7.65

CYCLES AT TERMINATION/FAILURE:
2 Lives/ _____

STATIC LOAD A-32.4 K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>1.0283</u> <u>1.0215</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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GENERAL DYNAMICS
Fort Worth Division
TABULATION SHEET

FATIGUE TEST DATA

SPECIMEN NUMBER: CW-29

SPECTRUM: 16000 Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5007

AVERAGE THICKNESS: 3739 3235 3742

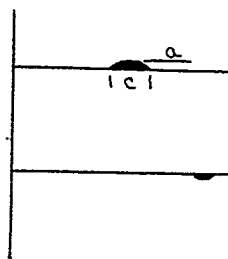
AREA: 500 3742 R-Cal 17925 (74%) Cal.S 94%

BASELINE STRESS: 19075 Appt 7.63

MAX. LOAD: 19075

CYCLES AT TERMINATION/FAILURE: 3 Lives/

(1)
STATIC LOAD A-32.1 K#
B- K#



FATIGUE TEST DATA

SPECIMEN NUMBER: CW 30

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: _____

AVERAGE WIDTH: 1.5006

AVERAGE THICKNESS: 3755 3784 3745

AREA: 5634 R-Cal 8176 (94%)

BASELINE STRESS: 34% Cal.S 43%

MAX. LOAD: 19156 Appt 7.06

CYCLES AT TERMINATION/FAILURE: _____

2 Lives/

STATIC LOAD A-32.0 K#
B- K#

310

FRACTOGRAPHIC DATA

FLIGHT HRS	CRACK LENGTH INCH	INCREMENT INCH
3840	<u>0.212</u>	<u>0.0768</u>
3760		
3680		
3600		
3520		
3440		
3360		
3280		
3200		
3120		
3040		
2960		
2880		
2800		
2720		
2640		
2560		
2480		
2400		
2320		
2240		
2160		
2080		
2000		
1920		
1840		
1760		
1680		
1600		
1520		
1440		
1360		
1280		
1200		
1120		
1040		
960		
880		
800		
720		
640		
560		
480		
400		
320		
240		

Blk #	FLIGHT HRS	CRACK LENGTH IN.	INCREMENT
40	16000	<u>0.2132</u>	<u>0.0768</u>
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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2.5.2 TL
(Taper Ldcd
Holes)

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

4 lives = 2 x

SPECIMEN NUMBER: TL-1

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5017

AVERAGE THICKNESS: .3766 .3765 .3766

AREA: .5655 REAL 10670 (7960)

BASILINE STRESS: 38 KSI CALC 87%

MAX. LOAD: 21488 A.M.T. 0.60

CYCLES AT TERMINATION/FAILURE:

4 lives / 3,062,988 LP's

STATIC LOAD A-32.6 K-H

11- K-H

No fatigue origin

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	0.0000	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

4 lives = 2 x

SPECIMEN NUMBER: TL-2

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5018

AVERAGE THICKNESS: .3764 .3762 .3765

AREA: .5652 REAL 10136

BASILINE STRESS: 38 CALC 89%

MAX. LOAD: 21478 A.M.T. 0.60

CYCLES AT TERMINATION/FAILURE:

4 lives / 3,062,988 LP's

STATIC LOAD A-32.4 K-H

11- K-H

No fatigue origin

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	0.0000	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(327)

FATIGUE TEST DATA

SPECIMEN NUMBER: TL-3

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AV. TRACE WIDTH: 1.5022

AV. TRACE THICKNESS: 3767 3767 3766

A.R.F.A: 5658 RCAL 18675 196

BASELINE STRESS: 45 Ksc CAL 5 87-70

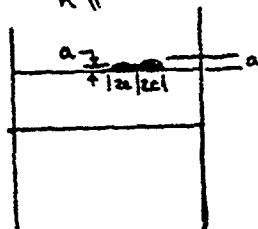
MAX. LOAD: 24501 25461 A.M.T. 860

CYCLES AT TERMINATION: 4000 3828 3512

2 Lives/

STATIC LOAD A-31.9 K4

11- K4



FATIGUE TEST DATA

SPECIMEN NUMBER: TL-4

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B D/A-18

AV. TRACE WIDTH: 1.5031

AV. TRACE THICKNESS: 3783 3780 3755

A.R.F.A: 5640 RCAL 18670

BASELINE STRESS: 28 Ksc 45 Ksc CAL 5 87-74

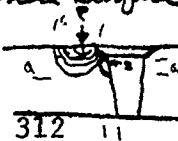
MAX. LOAD: 2455 25380 A.M.T. 857

CYCLES AT TERMINATION: 4 594 482 LP's

STATIC LOAD A-28.8 K4

11- K4

Primary origin lies on specimen surface away from counterbore.
Secondary origin was from taper hole and was affected by the primary origin



FRAC TOGRAPHIC DATA

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>1.0777</u> <u>1.00735</u>	<u>2.2</u> <u>0.4475</u>
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Bik #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>1.106</u> <u>1.0400</u>	
39	15600	<u>C</u> <u>D</u>	
38	15200	<u>1.076</u> <u>1.1500</u>	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

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FATIGUE TEST DATA

SPECIMEN NUMBER:

TL-5

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: C D/A-19

AVERAGE WIDTH: 1.5032

AVERAGE THICKNESS: 1.3771 1.3774 1.3768

AREA: .5669

REAL 191%

BASILINE STRESS: 45 KSI

75% CALS

MAX. LOAD: 25.511

APPT. 862

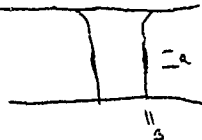
CYCLES AT FAILURE: *

6 Lives 1,594,182 LP's

@ 3,752,749 LP's

STATIC LOAD A-32.1 K4

Failure occurred in radius area at grip end.



FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	1.0112	
39	15600		
38	15200	0.9946	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	775		

FATIGUE TEST DATA

SPECIMEN NUMBER:

TL-6

SPECTRUM: Fighter

TEST DATE:

A D/A-17

TEST FRAME:

AVERAGE WIDTH: 1.5034

AVERAGE THICKNESS: 1.3765 1.3767 1.3763

AREA: .5660

REAL 18675

BASILINE STRESS: 45 KSI

CALS 73%

MAX. LOAD: 25.471

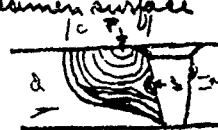
APPT. 840

CYCLES AT TERMINATION:

6 Lives 1,594,182 LP's

STATIC LOAD A-25.8 K4

Primary origin lies on specimen surface away from countermark
Secondary origin was from Taperlock Hole and was affected by the primary origin.



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Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	1.0121	
39	15600		
38	15200	0.9946	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	775		

FATIGUE TEST DATA

SPECIMEN NUMBER: TL-7

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A

AVERAGE WIDTH: 1.5019

AVERAGE THICKNESS: .3762 .3767 .3786

AREA: .5649 RCAL 18675

BASLINE STRESS: 45Ks CAL 73%

MAX. LOAD: 25422 A.M.T. 0V7

CYCLES AT TERMINATION: 2 Lives/

STATIC LOAD A-32.1 K4
li- K4



FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>TOP SMALL</u>	
39	15600	<u>TO MEASURE</u>	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: TL-8

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B

AVERAGE WIDTH: 1.5026

AVERAGE THICKNESS: .3763 .3768 .3768

AREA: .5654 RCAL 18670

BASLINE STRESS: 45Ks CAL 73%

MAX. LOAD: 25444 A.M.T. 0V8

CYCLES AT TERMINATION: 2 Lives/

STATIC LOAD A-32.55 K4
li- K4

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	<u>CRACK TO SMALL</u>	
39	15600	<u>TO MEASURE</u>	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: TL-9

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: C

AVERAGE WIDTH: 1.5029

AVERAGE THICKNESS: .5714 .3774 .3774

A RFA: .5672 RCAL 1917C

BASLINE STRESS: 45Ksi CAL 759

MAX. LOAD: 25523 A.POT. 851

CYCLES AT TERMINATION: 2 Lives/

STATIC LOAD A-32.7 K#
B- K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT
40	16000	CRACK TOO SMALL	
39	15600	TO MEASURE	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 10

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A 2 3 4 5 6

AVERAGE WIDTH: 1.5031

AVERAGE THICKNESS: .3763 .3763 .3763

A: .5656 RCAL 18675

BASLINE STRESS: 45Ksi CAL 73%

MAX. LOAD: 25453 A.POT. 848 1 Life

CYCLES AT TERMINATION: 2 Lives/

STATIC LOAD A-32.6 K#
B- K#

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600	NO CRACK	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER:

TL 11

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: 1 B 2 3 4 5 6

RAGE WIDTH: 1.5032

RAGE THICKNESS: .3769 .3770 .3768

A: .5666 PCAI 18670

ELINE STRESS: 45KSI CAI sing 73%

. LOAD: 25495 APT 1250 1 Life

LES AT TERMINATION/

2 Lives/

TATIC LOAD A-32.5K#
B- K#

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER:

TL 12

SPECTRUM: Fighter

TEST DATE:

TEST FRAME: 1 2 3 4 5 6

RAGE WIDTH: 1.5026

RAGE THICKNESS: .3780 .3774 .3785

A: .5680 PCAI 1913C

ELINE STRESS: 45 KSI CAI sing 75%

. LOAD: 25556 APT 1250 1 Life

LES AT TERMINATION/

2 Lives/

TATIC LOAD A-32.7K#
B- K#

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000		
39	15600	CPACIL 7.50 Small	
38	15200	70 measure	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN.
40	16000	NO CRACK	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: TL-13

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 A 2 3 4 5 6

AVERAGE WIDTH: 1.5024

AVERAGE THICKNESS: 3771 3771

AREA: .561da R CAL 18075

BASELINE STRESS: 45.15ksi CAL SWING 73%

MAX. LOAD: 25495 A POT Q40 1 Life

CYCLES AT FAILURE:

5 1591.71 PLT-HRS 6 Lives 4594.482 L.P.s

@ 3961.954 L.P.s 4391.78

STATIC LOAD A- K# B- K#

Primary origin lies on spec.
Surface away from contrails
etc.



FRAC TOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>.496</u> <u>.059a</u>	
39	15500		
38	15200	<u>.4512</u> <u>.2632</u>	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: TL 14

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 B 2 3 4 5 6

AVERAGE WIDTH: 1.529

AVERAGE THICKNESS: 3766 3760 3771

AREA: .565 R CAL 18670

BASELINE STRESS: 45.15ksi CAL SWING 73%

MAX. LOAD: 25466 A POT Q40 1 Life

CYCLES AT TERMINATION/FAILURE:

6 Lives 4594.482 L.P.s

STATIC LOAD A- 31.15 K# B- A K#



317

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>.435</u> <u>.0335</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

SPECIMEN NUMBER: TL-15

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5024

AVERAGE THICKNESS: 3792 3743 3741

AREA: 5622

R CAL 131X

BASLINE STRESS: 45ksi

CAL SWING 76%

MAX. LOAD: 25300

A POT 240

1 Life

CYCLES AT TERMINATION/REMARKS:

6 Lives: 4,594,482 L.P.C.

STATIC LOAD

A-32.5 K#

B-A K#



FATIGUE TEST DATA

SPECIMEN NUMBER: TL 16

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5019

AVERAGE THICKNESS: 3768 3767 3769

AREA: 5659

R CAL 18675

BASLINE STRESS: 45ksi

CAL SWING 73%

MAX. LOAD: 25466

A POT 241

1 Life

CYCLES AT TERMINATION/REMARKS:

2 Lives/

STATIC LOAD

A-32.2 K#

B-A K#



318

FRACTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>0.0249</u> <u>1.0231</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>CRACKS TOO</u>	
39	15600	<u>SMALL TO</u>	
38	15200	<u>MEASURE</u>	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

314

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 17

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5026

AVERAGE THICKNESS: .3771 .3773 .3768

AREA: .5610 R CAL 18670

BASLINE STRESS: 45 CAL SWING 73%

MAX. LOAD: 25495 A POT .040 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-32.5 K#
B- A K#

B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	NO CRACK	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 18

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5030

AVERAGE THICKNESS: .3763 .3756 .3770

AREA: .5656 R CAL 19150

BASLINE STRESS: 45% CAL SWING 75%

MAX. LOAD: 25451 A POT .331 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-32.45 K#
B- A K#

B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	NO CRACK	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

319

315

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 19

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A 1 2 3 4 5 6

AVERAGE WIDTH: 1.5029

AVERAGE THICKNESS: .5765 3761 3769

AREA: .5658 R CAL 18675

BASILINE STRESS: 45 KSI CAL SWING 70%

MAX. LOAD: 25460 A POT .24 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-32.65 K#
B- A K#

B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	no crack	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 20

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B 1 2 3 4 5 6

AVERAGE WIDTH: 1.5021

AVERAGE THICKNESS: .3770 3769 3771

AREA: .5663 R CAL 18670

BASILINE STRESS: 45 KSI CAL SWING ~3%

MAX. LOAD: 25483 A POT _____ 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-32.4 K#
B- A K#

B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>.6738</u> <u>.0123</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

320

316

FRACTOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 21

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: (C) 2 3 4 5 6

AVERAGE WIDTH: 1.5027

AVERAGE THICKNESS: .3765 3772 3789

AREA: 5658 R CAL 19136

BASLINE STRESS: 45 KSC CAL SWING 75%

MAX. LOAD: 25460 A POT _____ 1 Life

CYCLES AT TERMINATION/_____:

2 Lives/_____

STATIC LOAD

A-3245 K#
B- A K#



B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	CRACK TO small	
39	15600	TO MEASURE	
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 22

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 A 2 3 4 5 6

AVERAGE WIDTH: 1.5029

AVERAGE THICKNESS: .3717 .3781 .3772

AREA: 5676 R CAL 18675

BASLINE STRESS: 45 KSC CAL SWING 73%

MAX. LOAD: 25541 A POT 3.51 1 Life

CYCLES AT TERMINATION/_____:

2 Lives/_____

STATIC LOAD

A-32.6 K#
B- A K#



321

B

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	NO CRACK	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(317)

FRAC TOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 23

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.501

AVERAGE THICKNESS: .375 .375 .375

AREA: .5647 R CAL 10670

BASELINE STRESS: 45 KSC CAL SWING 73%

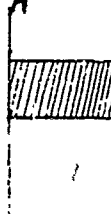
MAX. LOAD: 25412 A POT .847 1 Life

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD

A-32.1 K#
B-A K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT 1.
40	16000	NO CRACK	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 24

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5022

AVERAGE THICKNESS: .3700 .3767 .3768

AREA: .5600 R CAL 10916

BASELINE STRESS: 45 KSI CAL SWING 75%

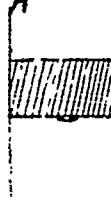
MAX. LOAD: 25408 A POT .850 1 Life

CYCLES AT TERMINATION/_____

2 Lives/_____

STATIC LOAD

A-32.5 K#
B-A K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT 1.
40	16000	CRACK TOO SMALL TO MEASURE	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 25

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: A 1 2 3 4 5 6

AVERAGE WIDTH: 1.5019

AVERAGE THICKNESS: 3765 3774 3786

AREA: .5655 R CAL 18675

BASILINE STRESS: 45ksi CAL SWING 73%

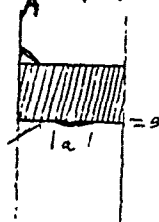
MAX. LOAD: 25446 A POT .848 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-31.85K#
B- K#



FOTOGRAPIIC DATA			
Blk #	FLIGHT HRS.	CRACK LENGTH IN. ^A / _B	INCREMENT IN
40	16000	.0751 / .0063	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 26

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: B 1 2 3 4 5 6

AVERAGE WIDTH: 1.5027

AVERAGE THICKNESS: 3753 3754 3752

AREA: .5640 R CAL 18670

BASILINE STRESS: 45ksi CAL SWING 74%

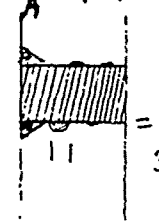
MAX. LOAD: 25778 A POT .850 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-31.65K#
B- K#



FOTOGRAPIIC DATA			
Blk #	FLIGHT HRS.	CRACK LENGTH IN. ^A / _B	INCREMENT IN
40	16000	.0820 / .0201	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(317)

F ETIOGRAPHIC DATA

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 27

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5021

AVERAGE THICKNESS: .3756 .3757 .3755

AREA: .5642 R CAL 181%

BASLINE STRESS: _____ CAL SWING 75%

MAX. LOAD: 25388 A POT 846 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-32.3 K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>Crack Top</u>	
39	15600	<u>Crack Top</u>	
38	15200	<u>Crack Top</u>	
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 28

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WI TH: 1.5021

AVERAGE THICKNESS: .3747 .3760 .3774

AREA: .5658 R CAL 186%

BASLINE STRESS: _____ CAL SWING 73%

MAX. LOAD: 25463 A POT 840 1 Life

CYCLES AT TERMINATION: _____

2 Lives/ _____

STATIC LOAD

A-32.1 K#
B- K#



Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>.0676</u> <u>1.0121</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

(340)

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 29

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5024

AVERAGE THICKNESS: .3767 .3769 .3769

AREA: .5663

R CAL 18670

BASLINE STRESS: _____

CAL SWING 72%

MAX. LOAD: 25481

A POT 830

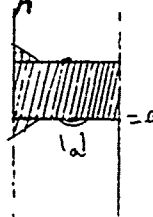
1 Life

CYCLES AT TERMINATION 325

2 Lives/ _____

STATIC LOAD

A-3185K#
B- A K#



F PHOTOGRAPHIC DATA

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>1.255</u> <u>1.0163</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

FATIGUE TEST DATA

2 Lives

SPECIMEN NUMBER: TL 30

SPECTRUM: Fighter

TEST DATE: _____

TEST FRAME: 1 2 3 4 5 6

AVERAGE WIDTH: 1.5026

AVERAGE THICKNESS: .3765 .3769 .3770

AREA: .5657

R CAL 19136

BASLINE STRESS: _____

CAL SWING 75%

MAX. LOAD: 25454

A POT 840

1 Life

CYCLES AT TERMINATION 325

2 Lives/ _____

STATIC LOAD

A-3245K#
B- A K#



325

Blk #	FLIGHT HRS.	CRACK LENGTH IN.	INCREMENT IN
40	16000	<u>NO CRACK</u>	
39	15600		
38	15200		
37	14800		
36	14400		
35	14000		
34	13600		
33	13200		
32	12800		
31	12400		
30	12000		
29	11600		
28	11200		
27	10800		
26	10400		
25	10000		
24	9600		
23	9200		
22	8800		
21	8400		
20	8000		
19	7600		
18	7200		
17	6800		
16	6400		
15	6000		
14	5600		
13	5200		
12	4800		
11	4400		
10	4000		
9	3600		
8	3200		
7	2800		
6	2400		
5	2000		
4	1600		
3	1200		
2	800		
1	400		

325

III EQUIVALENT INITIAL FLAW
AND CRACK DEPTH LISTINGS

3.1 TASK I

3.1.1 WPF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0256410	0.0001322	WPF-42	0.000
0.0512821	0.0002047	WPF-15	0.000
0.0769231	0.0002140	WPF-43	0.000
0.1025641	0.0002654	WPF-41	0.000
0.1282051	0.0003724	WPF-27	488.857
0.1538462	0.0003904	WPF-28	932.151
0.1794872	0.0004184	WPF-36	510.410
0.2051282	0.0004188	WPF-26	576.401
0.2307692	0.0004244	WPF-30	929.207
0.2564103	0.0004569	WPF-37	581.591
0.2820513	0.0004598	WPF-20	331.564
0.3076923	0.0004671	WPF-33	177.412
0.3333333	0.0004889	WPF-40	442.525
0.3589744	0.0004893	WPF-39	1015.833
0.3846154	0.0005179	WPF-38	1173.295
0.4102564	0.0005209	WPF-24	463.075
0.4358974	0.0005376	WPF-31	1079.266
0.4615385	0.0005424	WPF-29	467.002
0.4871795	0.0005992	WPF-17	0.000
0.5128205	0.0006048	WPF-12	318.553
0.5384616	0.0006317	WPF-10	749.224
0.5641026	0.0006353	WPF-34	609.006
0.5897436	0.0006380	WPF-22	597.188
0.6153846	0.0006419	WPF-35	452.757
0.6410257	0.0006431	WPF-19	586.414
0.6666667	0.0006650	WPF-13	648.358
0.6923077	0.0006759	WPF-25	570.701
0.7179487	0.0007126	WPF-32	803.949
0.7435898	0.0007323	WPF-14	921.296
0.7692308	0.0007626	WPF-23	991.288
0.7948718	0.0007985	WPF-18	1037.710
0.8205128	0.0008674	WPF-8	750.999
0.8461539	0.0009282	WPF-6	372.480
0.8717949	0.0010240	WPF-9	1084.163
0.8974359	0.0011012	WPF-16	1327.437
0.9230769	0.0011342	WPF-21	959.920
0.9487180	0.0012987	WPF-7	1322.753
0.9743590	0.0023162	WPF-11	1909.125

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0002372	WPF-42
0.0512821	0.0003861	WPF-15
0.0769231	0.0004046	WPF-43
0.1025641	0.0005089	WPF-41
0.1282051	0.0007420	WPF-27
0.1538462	0.0007841	WPF-28
0.1794872	0.0008511	WPF-36
0.2051282	0.0008521	WPF-26
0.2307692	0.0008656	WPF-30
0.2564103	0.0009466	WPF-37
0.2820513	0.0009538	WPF-20
0.3076923	0.0009725	WPF-33
0.3333333	0.0010286	WPF-40
0.3589744	0.0010297	WPF-39
0.3846154	0.0011053	WPF-38
0.4102564	0.0011132	WPF-24
0.4358974	0.0011585	WPF-31
0.4615385	0.0011717	WPF-29
0.4871795	0.0013306	WPF-17
0.5128205	0.0013462	WPF-12
0.5384616	0.0014251	WPF-10
0.5641026	0.0014355	WPF-34
0.5897436	0.0014455	WPF-22
0.6153846	0.0014551	WPF-35
0.6410257	0.0014585	WPF-19
0.6666667	0.0015238	WPF-13
0.6923077	0.0016690	WPF-32
0.7179487	0.0017000	WPF-25
0.7435893	0.0017302	WPF-14
0.7692303	0.0018250	WPF-23
0.7948718	0.0021390	WPF-7
0.8205128	0.0022722	WPF-8
0.8461539	0.0024578	WPF-6
0.8717949	0.0025000	WPF-18
0.8974359	0.0029000	WPF-16
0.9230769	0.0030000	WPF-9
0.9487180	0.0039000	WPF-21
0.9743590	0.0098000	WPF-11

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0004512	WPF-42
0.0512821	0.0007739	WPF-15
0.0769231	0.0008179	WPF-43
0.1025641	0.0010812	WPF-41
0.1282051	0.0016000	WPF-27
0.1538462	0.0022000	WPF-20
0.1794872	0.0022000	WPF-28
0.2051282	0.0022000	WPF-36
0.2307692	0.0023000	WPF-26
0.2564103	0.0025000	WPF-33
0.2820513	0.0029000	WPF-24
0.3076923	0.0029000	WPF-30
0.3333333	0.0029000	WPF-37
0.3589744	0.0030000	WPF-40
0.3846154	0.0030000	WPF-29
0.4102564	0.0038000	WPF-39
0.4358974	0.0038518	WPF-17
0.4615385	0.0039136	WPF-12
0.4871795	0.0041000	WPF-38
0.5128205	0.0043000	WPF-31
0.5384616	0.0049000	WPF-35
0.5641026	0.0050000	WPF-19
0.5897436	0.0051000	WPF-10
0.6153846	0.0051000	WPF-34
0.6410257	0.0052000	WPF-22
0.6666667	0.0055000	WPF-25
0.6923077	0.0057000	WPF-13
0.7179487	0.0069000	WPF-32
0.7435898	0.0072000	WPF-14
0.7692308	0.0081000	WPF-18
0.7948718	0.0085000	WPF-23
0.8205128	0.0097000	WPF-6
0.8461539	0.0101000	WPF-8
0.8717949	0.0140000	WPF-9
0.8974359	0.0154000	WPF-21
0.9230769	0.0163500	WPF-7
0.9487180	0.0177000	WPF-16
0.9743590	0.0416000	WPF-11

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0009322	WPF-42
0.0512821	0.0018620	WPF-15
0.0769231	0.0020044	WPF-43
0.1025641	0.0029159	WPF-41
0.1282051	0.0059000	WPF-28
0.1538462	0.0060000	WPF-27
0.1794872	0.0068000	WPF-30
0.2051282	0.0075000	WPF-26
0.2307692	0.0078000	WPF-36
0.2564103	0.0085000	WPF-39
0.2820513	0.0087000	WPF-37
0.3076923	0.0089000	WPF-33
0.3333333	0.0094000	WPF-38
0.3589744	0.0099000	WPF-20
0.3846154	0.0100000	WPF-31
0.4102564	0.0102000	WPF-40
0.4358974	0.0127000	WPF-24
0.4615385	0.0129000	WPF-29
0.4871795	0.0147558	WPF-17
0.5128205	0.0160000	WPF-12
0.5384616	0.0173000	WPF-22
0.5641026	0.0175000	WPF-35
0.5897436	0.0176000	WPF-34
0.6153846	0.0177000	WPF-19
0.6410257	0.0180000	WPF-13
0.6666667	0.0182000	WPF-10
0.6923077	0.0191000	WPF-25
0.7179487	0.0200000	WPF-32
0.7435896	0.0222000	WPF-23
0.7692308	0.0224000	WPF-14
0.7948718	0.0230000	WPF-18
0.8205128	0.0295000	WPF-8
0.8461539	0.0335000	WPF-6
0.8717949	0.0345000	WPF-9
0.8974359	0.0371000	WPF-16
0.9230769	0.0379000	WPF-21
0.9487180	0.0816400	WPF-7
0.9743590	0.1271000	WPF-11

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0024000	WPF-42
0.0512821	0.0060000	WPF-15
0.0769231	0.0066000	WPF-43
0.1025641	0.0106000	WPF-41
0.1282051	0.0129000	WPF-28
0.1538462	0.0160000	WPF-27
0.1794872	0.0170000	WPF-30
0.2051282	0.0194000	WPF-26
0.2307692	0.0195000	WPF-36
0.2564103	0.0200000	WPF-38
0.2820513	0.0210000	WPF-39
0.3076923	0.0220000	WPF-31
0.3333333	0.0222000	WPF-37
0.3589744	0.0209000	WPF-40
0.3846154	0.0290000	WPF-20
0.4102564	0.0313000	WPF-33
0.4358974	0.0337000	WPF-24
0.4615385	0.0339000	WPF-29
0.4871795	0.0410000	WPF-10
0.5128205	0.0411000	WPF-34
0.5384616	0.0422000	WPF-22
0.5641026	0.0435000	WPF-19
0.5897436	0.0444000	WPF-14
0.6153846	0.0452000	WPF-13
0.6410257	0.0463000	WPF-25
0.6666667	0.0472000	WPF-35
0.6923077	0.0475000	WPF-23
0.7179487	0.0478000	WPF-32
0.7435898	0.0485000	WPF-12
0.7692308	0.0485000	WPF-18
0.7948718	0.0577540	WPF-17
0.8205128	0.0688000	WPF-16
0.8461539	0.0702000	WPF-9
0.8717949	0.0724000	WPF-8
0.8974359	0.0845000	WPF-21
0.9230769	0.0954000	WPF-6
0.9487180	0.0959182	WPF-11
0.9743590	0.1138031	WPF-7

3.1.2 WIF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0714286	0.0005304	WIF-11	705.008
0.1428571	0.0007837	WIF-9	428.117
0.2142857	0.0008677	WIF-6	879.658
0.2857143	0.0011123	WIF-2	854.322
0.3571429	0.0011370	WIF-7	666.641
0.4285714	0.0011682	WIF-3	1308.052
0.5000000	0.0011758	WIF-10	849.538
0.5714286	0.0012308	WIF-4	1051.858
0.6428571	0.0013589	WIF-1	200.626
0.7142857	0.0014443	WIF-12	600.026
0.7857143	0.0014594	WIF-13	732.893
0.8571429	0.0015931	WIF-8	704.084
0.9285714	0.0023227	WIF-5	048.973

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0011389	WIF-11
0.1428571	0.0016000	WIF-3
0.2142857	0.0016511	WIF-9
0.2857143	0.0024000	WIF-6
0.3571429	0.0024000	WIF-12
0.4285714	0.0026700	WIF-10
0.5000000	0.0031000	WIF-4
0.5714286	0.0033000	WIF-7
0.6428571	0.0036000	WIF-2
0.7142857	0.0038937	WIF-1
0.7857143	0.0047000	WIF-13
0.8571429	0.0048900	WIF-8
0.9285714	0.0108000	WIF-5

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0037000	WIF-11
0.1428571	0.0072200	WIF-9
0.2142857	0.0098000	WIF-6
0.2857143	0.0137000	WIF-2
0.3571429	0.0137000	WIF-7
0.4285714	0.0151000	WIF-10
0.5000000	0.0165000	WIF-1
0.5714286	0.0171000	WIF-3
0.6428571	0.0183000	WIF-4
0.7142857	0.0195000	WIF-12
0.7857143	0.0209000	WIF-13
0.8571429	0.0219700	WIF-8
0.9285714	0.0268000	WIF-5

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0134000	WIF-11
0.1428571	0.0242900	WIF-9
0.2142857	0.0272000	WIF-6
0.2857143	0.0339000	WIF-2
0.3571429	0.0372000	WIF-7
0.4285714	0.0441000	WIF-3
0.5000000	0.0469000	WIF-4
0.5714286	0.0506200	WIF-10
0.6428571	0.0509000	WIF-1
0.7142857	0.0578000	WIF-12
0.7857143	0.0579000	WIF-13
0.8571429	0.0636000	WIF-8
0.9285714	0.0659200	WIF-5

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0320000	WIF-11
0.1428571	0.0625000	WIF-9
0.2142857	0.0648000	WIF-6
0.2857143	0.0856000	WIF-2
0.3571429	0.1051000	WIF-7
0.4285714	0.1100000	WIF-3
0.5000000	0.1210000	WIF-4
0.5714286	0.1310000	WIF-1
0.6428571	0.1447000	WIF-10
0.7142857	0.1621000	WIF-12
0.7857143	0.1698000	WIF-13
0.8571429	0.2020000	WIF-5
0.9285714	0.2137300	WIF-8

3.1.3 WPB

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0263158	0.0000000	WPB-10	0.000
0.0526316	0.0000000	WPB-33	0.000
0.0789474	0.0000173	WPB-28	0.000
0.1052632	0.0000318	WPB-9	0.000
0.1315790	0.0000336	WPB-24	0.000
0.1578947	0.0000574	WPB-20	121.461
0.1842105	0.0000723	WPB-37	157.487
0.2105263	0.0000867	WPB-12	286.178
0.2368421	0.0000984	WPB-36	173.369
0.2631579	0.0001023	WPB-30	109.638
0.2894737	0.0001203	WPB-29	128.310
0.3157895	0.0001215	WPB-31	338.173
0.3421053	0.0001236	WPB-32	156.709
0.3684210	0.0001260	WPB-22	99.333
0.3947369	0.0001261	WPB-4	33.209
0.4210526	0.0001340	WPB-15	163.968
0.4473684	0.0001447	WPB-26	126.469
0.4736842	0.0001647	WPB-6	92.035
0.5000000	0.0001792	WPB-14	243.792
0.5263158	0.0001900	WPB-2	82.381
0.5526316	0.0002037	WPB-8	78.220
0.5789474	0.0002038	WPB-3	80.586
0.6052632	0.0002140	WPB-18	220.363
0.6315789	0.0002215	WPB-34	261.221
0.6578947	0.0002394	WPB-11	96.039
0.6842105	0.0002472	WPB-25	66.482
0.7105263	0.0002621	WPB-27	123.511
0.7368421	0.0002878	WPB-21	81.845
0.7631579	0.0002908	WPB-23	37.535
0.7894737	0.0003264	WPB-1	167.011
0.8157895	0.0003600	WPB-19	67.753
0.8421053	0.0003760	WPB-7	31.309
0.8684211	0.0004557	WPB-13	205.775
0.8947368	0.0004853	WPB-16	50.796
0.9210526	0.0004859	WPB-5	63.203
0.9473684	0.0005639	WPB-17	93.596
0.9736842	0.0005776	WPB-35	143.743

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0000745	WPB-12
0.0526316	0.0000768	WPB-36
0.0789474	0.0000828	WPB-30
0.1052632	0.0000946	WPB-29
0.1315790	0.0000963	WPB-4
0.1578947	0.0000970	WPB-32
0.1842105	0.0000995	WPB-22
0.2105263	0.0001228	WPB-15
0.2368421	0.0001274	WPB-26
0.2631579	0.0001364	WPB-31
0.2894737	0.0001386	WPB-6
0.3157895	0.0001654	WPB-2
0.3421053	0.0001739	WPB-3
0.3684210	0.0001795	WPB-8
0.3947369	0.0001822	WPB-14
0.4210526	0.0001823	WPB-37
0.4473684	0.0002414	WPB-11
0.4736842	0.0002464	WPB-18
0.5000000	0.0002480	WPB-34
0.5263158	0.0002651	WPB-20
0.5526316	0.0002678	WPB-27
0.5789474	0.0002874	WPB-35
0.6052632	0.0002914	WPB-23
0.6315789	0.0003058	WPB-11
0.6578947	0.0003874	WPB-1
0.6842105	0.0004047	WPB-19
0.7105263	0.0004598	WPB-7
0.7368421	0.0004670	WPB-24
0.7631579	0.0004848	WPB-9
0.7894737	0.0005427	WPB-5
0.8157895	0.0006250	WPB-13
0.8421053	0.0006475	WPB-28
0.8684211	0.0007550	WPB-16
0.8947368	0.0008206	WPB-35
0.9210526	0.0008561	WPB-17
0.9473684	0.0040284	WPB-10
0.9736842	0.0040284	WPB-33

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0001058	WPB-20
0.0526316	0.0001511	WPB-37
0.0789474	0.0001764	WPB-12
0.1052632	0.0001820	WPB-36
0.1315790	0.0001962	WPB-30
0.1578947	0.0002248	WPB-29
0.1842105	0.0002289	WPB-4
0.2105263	0.0002308	WPB-32
0.2368421	0.0002368	WPB-22
0.2631579	0.0002992	WPB-15
0.2894737	0.0003124	WPB-26
0.3157895	0.0003445	WPB-6
0.3421053	0.0004377	WPB-2
0.3684210	0.0004670	WPB-24
0.3947369	0.0004695	WPB-3
0.4210526	0.0004848	WPB-9
0.4473684	0.0004912	WPB-8
0.4736842	0.0006475	WPB-28
0.5000000	0.0007673	WPB-11
0.5263158	0.0009026	WPB-27
0.5526316	0.0010000	WPB-21
0.5789474	0.0010304	WPB-23
0.6052632	0.0011115	WPB-21
0.6315789	0.0017000	WPB-14
0.6578947	0.0020000	WPB-16
0.6842105	0.0020000	WPB-25
0.7105263	0.0026437	WPB-5
0.7368421	0.0027000	WPB-34
0.7631579	0.0037000	WPB-7
0.7894737	0.0039000	WPB-19
0.8157895	0.0040284	WPB-10
0.8421053	0.0040264	WPB-33
0.8684211	0.0043000	WPB-1
0.8947368	0.0053000	WPB-13
0.9210526	0.0055000	WPB-16
0.9473684	0.0070000	WPB-17
0.9736842	0.0090000	WPB-35

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0001260	WPB-28
0.0526316	0.0001548	WPB-9
0.0789474	0.0001589	WPB-24
0.1052632	0.0002530	WPB-20
0.1315790	0.0003871	WPB-37
0.1578947	0.0004789	WPB-12
0.1842105	0.0005010	WPB-36
0.2105263	0.0005592	WPB-30
0.2368421	0.0006874	WPB-29
0.2631579	0.0007055	WPB-4
0.2894737	0.0007158	WPB-32
0.3157895	0.0007450	WPB-22
0.3421053	0.0010742	WPB-15
0.3684210	0.0011492	WPB-26
0.3947369	0.0013099	WPB-31
0.4210526	0.0013386	WPB-6
0.4473684	0.0019293	WPB-2
0.4736842	0.0021413	WPB-3
0.5000000	0.0022880	WPB-8
0.5263158	0.0023601	WPB-14
0.5526316	0.0040284	WPB-10
0.5789474	0.0040284	WPB-33
0.6052632	0.0042665	WPB-11
0.6315789	0.0044521	WPB-18
0.6578947	0.0045122	WPB-34
0.6842105	0.0052733	WPB-27
0.7105263	0.0060550	WPB-25
0.7368421	0.0062309	WPB-23
0.7631579	0.0068456	WPB-21
0.7894737	0.0105264	WPB-1
0.8157895	0.0113351	WPB-19
0.8421053	0.0139547	WPB-7
0.8684211	0.0179405	WPB-5
0.8947368	0.0216503	WPB-13
0.9210526	0.0278321	WPB-16
0.9473684	0.0307422	WPB-35
0.9736842	0.0322805	WPB-17

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0001184	WPB-10
0.0526316	0.0001184	WPB-33
0.0789474	0.0003142	WPB-28
0.1052632	0.0003998	WPB-9
0.1315790	0.0004141	WPB-24
0.1578947	0.0008255	WPB-20
0.1842105	0.0029000	WPB-37
0.2105263	0.0038193	WPB-4
0.2368421	0.0041000	WPB-12
0.2631579	0.0055000	WPB-30
0.2894737	0.0064000	WPB-31
0.3157895	0.0064000	WPB-36
0.3421053	0.0084000	WPB-29
0.3684210	0.0092000	WPB-15
0.3947369	0.0092000	WPB-22
0.4210526	0.0098000	WPB-32
0.4473684	0.0100000	WPB-26
0.4736842	0.0128000	WPB-14
0.5000000	0.0143000	WPB-18
0.5263158	0.0148000	WPB-34
0.5526316	0.0148000	WPB-6
0.5789474	0.0180000	WPB-2
0.6052632	0.0190000	WPB-8
0.6315790	0.0197000	WPB-3
0.6578947	0.0219000	WPB-11
0.6842105	0.0225000	WPB-25
0.7105263	0.0227000	WPB-27
0.7368421	0.0270000	WPB-1
0.7631579	0.0284000	WPB-21
0.7894737	0.0302000	WPB-23
0.8157895	0.0365000	WPB-19
0.8421053	0.0369000	WPB-13
0.8684211	0.0470000	WPB-7
0.8947369	0.0510000	WPB-16
0.9210526	0.0550000	WPB-35
0.9473684	0.0550000	WPB-5
0.9736842	0.0600000	WPB-17

CUM PROB	CRACK DEPTH	SPECIMEN
0.263158	0.0002867	WPB-10
0.0526316	0.0002867	WPB-33
0.0789474	0.0011595	WPB-28
0.1052632	0.0016825	WPB-9
0.1315790	0.0017745	WPB-24
0.1578947	0.0046984	WPB-20
0.1842105	0.0105126	WPB-37
0.2105263	0.0148803	WPB-12
0.2368421	0.0159402	WPB-36
0.2631579	0.0187307	WPB-30
0.2894736	0.0247555	WPB-29
0.3157895	0.0256358	WPB-4
0.3421053	0.0260572	WPB-32
0.3684210	0.0273842	WPB-22
0.3947369	0.0412269	WPB-15
0.4210526	0.0441050	WPB-26
0.4773684	0.0499493	WPB-31
0.4736842	0.0509490	WPB-6
0.5000000	0.0690463	WPB-2
0.5263158	0.0745741	WPB-3
0.5526316	0.0781552	WPB-8
0.5789474	0.0798474	WPB-14
0.6052632	0.1134588	WPB-11
0.6315789	0.1159172	WPB-18
0.6578947	0.1166944	WPB-34
0.6842105	0.1256778	WPB-27
0.7105263	0.1336960	WPB-25
0.7368421	0.1352032	WPB-23
0.7631579	0.1404815	WPB-21
0.7894737	0.1637822	WPB-1
0.8157895	0.1676146	WPB-19
0.8421053	0.1780467	WPB-7
0.8684211	0.1899732	WPB-5.
0.8947368	0.1989379	WPB-13
0.9210526	0.2096353	WPB-16
0.9473684	0.2140103	WPB-35
0.9736842	0.2161821	WPB-17

CUM. PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0010000	WPB-10
0.0526316	0.0010000	WPB-33
0.0789474	0.0072000	WPB-28
0.1052632	0.0111000	WPB-9
0.1315790	0.0117000	WPB-24
0.1578947	0.0141000	WPB-20
0.1842105	0.0180000	WPB-37
0.2105263	0.0196000	WPB-12
0.2368421	0.0269000	WPB-31
0.2631579	0.0340000	WPB-36
0.2894737	0.0437000	WPB-30
0.3157895	0.0510000	WPB-15
0.3421053	0.0530000	WPB-32
0.3684210	0.0547000	WPB-29
0.3947369	0.0673000	WPB-22
0.4210526	0.0743000	WPB-14
0.4473684	0.0770000	WPB-25
0.4736842	0.0840000	WPB-4
0.5000000	0.0936000	WPB-34
0.5263158	0.0990000	WPB-6
0.5526316	0.1026000	WPB-18
0.5789474	0.1103000	WPB-3
0.6052632	0.1172000	WPB-2
0.6315789	0.1464000	WPB-8
0.6578947	0.1610000	WPB-11
0.6842105	0.2023000	WPB-27
0.7105263	0.2236000	WPB-23
0.7368421	0.2474000	WPB-1
0.7631579	0.2510615	WPB-19
0.7894737	0.2597000	WPB-21
0.8157895	0.2621239	WPB-7
0.8421053	0.2781082	WPB-5
0.8684211	0.2914000	WPB-13
0.8947368	0.3175415	WPB-16
0.9210526	0.3294111	WPB-35
0.9473684	0.3347000	WPB-25
0.9736842	0.4250000	WPB-17

3.1.4 WIB

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0769231	0.0000534	WIB-10	153.501
0.1538462	0.0001171	WIB-3	150.575
0.2307692	0.0001490	WIB-12	162.187
0.3076923	0.0001801	WIB-11	394.392
0.3846154	0.0001868	WIB-5	278.339
0.4615385	0.0001962	WIB-9	304.648
0.5384616	0.0002194	WIB-8	209.675
0.6153846	0.0002226	WIB-7	260.900
0.6923077	0.0002907	WIB-2	307.785
0.7692308	0.0003934	WIB-6	164.275
0.8461539	0.0005145	WIB-4	153.833
0.9230769	0.0012608	WIB-1	148.510

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0001235	WIB-10
0.1538462	0.0003004	WIB-3
0.2307692	0.0003954	WIB-12
0.3076923	0.0005203	WIB-5
0.3846154	0.0005707	B-11
0.4615385	0.0005810	WIB-9
0.5384616	0.0006623	WIB-8
0.6153846	0.0007606	WIB-7
0.6923077	0.0011905	WIB-2
0.7682308	0.0017782	WIB-6
0.8461539	0.0027579	WIB-4
0.9230769	0.0102684	WIB-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0003010	WIB-10
0.1538462	0.0010608	WIB-3
0.2307692	0.0016545	WIB-12
0.3076923	0.0038000	WIB-9
0.3846154	0.0044000	WIB-5
0.4615385	0.0046000	WIB-11
0.5384616	0.0055000	WIB-8
0.6153846	0.0060000	WIB-7
0.6923077	0.0100000	WIB-2
0.7692308	0.0137000	WIB-6
0.8461539	0.0182000	WIB-4
0.9230769	0.0450000	WIB-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0010845	WIB-10
0.1538462	0.0066128	WIB-3
0.2307692	0.0108995	WIB-12
0.3076923	0.0162683	WIB-5
0.3846154	0.0192793	WIB-11
0.4615385	0.0197672	WIB-9
0.5384616	0.0235962	WIB-8
0.6153846	0.0280060	WIB-7
0.6923077	0.0456464	WIB-2
0.7692308	0.0648250	WIB-6
0.8461539	0.0884915	WIB-4
0.9230769	0.1624912	WIB-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0085000	WIB-10
0.1538462	0.0260000	WIB-5
0.2307692	0.0298000	WIB-9
0.3076923	0.0300000	WIB-3
0.3846154	0.0306000	WIB-11
0.4615385	0.0394000	WIB-12
0.5384616	0.0497000	WIB-8
0.6153846	0.0540000	WIB-7
0.6923077	0.0640000	WIB-2
0.7692308	0.1285000	WIB-6
0.8461539	0.1870000	WIB-4
0.9230769	0.3300000	WIB-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0416309	WIB-10
0.1538462	0.1325414	WIB-3
0.2307692	0.1635922	WIB-12
0.3076923	0.1870942	WIB-5
0.3846154	0.1932831	WIB-11
0.4615385	0.1944171	WIB-9
0.5384616	0.2023693	WIB-8
0.6153846	0.2100501	WIB-7
0.6923077	0.2324049	WIB-2
0.7692308	0.2530652	WIB-6
0.8461539	0.2812181	WIB-4
0.9230769	0.4563057	WIB-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0995000	WIB-10
0.1538462	0.2276948	WIB-3
0.2307692	0.2491197	WIB-12
0.3076923	0.2738709	WIB-5
0.3846154	0.2834201	WIB-11
0.4615385	0.2850435	WIB-9
0.5384616	0.3005209	WIB-8
0.6153846	0.3185192	WIB-7
0.6923077	0.3939939	WIB-2
0.7692308	0.4889562	WIB-6
0.8461539	0.5278436	WIB-4
0.9230769	1.0987365	WIB-1

3.1.5 QPF

1.

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0263158	0.0001806	QPF-7	0.000
0.0526316	0.0002585	QPF-11	0.000
0.0789474	0.0002733	QPF-24	0.000
0.1052632	0.0003658	QPF-29	0.000
0.1315790	0.0003729	QPF-33	0.000
0.1578947	0.0003983	QPF-19	0.000
0.1842105	0.0004429	QPF-22	0.000
0.2105263	0.0004606	QPF-23	0.000
0.2368421	0.0004846	QPF-9	734.199
0.2631579	0.0004856	QPF-16	0.000
0.2894737	0.0004996	QPF-10	729.594
0.3157895	0.0005217	QPF-12	737.209
0.3421053	0.0005394	QPF-28	1000.915
0.3684210	0.0005854	QPF-13	622.244
0.3947369	0.0005913	QPF-1	628.935
0.4210526	0.0006025	QPF-15	1274.765
0.4473684	0.0006322	QPF-32	684.387
0.4736842	0.0006764	QPF-6	1007.635
0.5000000	0.0006921	QPF-21	376.131
0.5263158	0.0008406	QPF-18	703.289
0.5526316	0.0008909	QPF-2	795.355
0.5789474	0.0008957	QPF-34	900.985
0.6052632	0.0009693	QPF-4	1064.163
0.6315789	0.0009697	QPF-26	916.807
0.6578947	0.0009949	QPF-36	956.505
0.6842105	0.0010330	QPF-37	770.057
0.7105263	0.0011001	QPF-8	1406.264
0.7368421	0.0011083	QPF-20	1126.555
0.7631579	0.0011165	QPF-17	1156.420
0.7894737	0.0012168	QPF-25	1649.532
0.8157895	0.0012452	QPF-5	449.336
0.8421053	0.0012621	QPF-31	1013.116
0.8684211	0.0012885	QPF-30	433.199
0.8947368	0.0014652	QPF-14	1011.265
0.9210526	0.0016862	QPF-35	317.767
0.9473684	0.0019716	QPF-3	569.232
0.9736842	0.0030847	QPF-38	412.359

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263159	0.0003000	QPF-10
0.0526316	0.0003379	QPF-7
0.0789474	0.0004945	QPF-11
0.1052632	0.0005000	QPF-15
0.1315790	0.0005252	QPF-24
0.1578947	0.0007270	QPF-29
0.1842105	0.0007433	QPF-33
0.2105263	0.0008027	QPF-19
0.2368421	0.0009112	QPF-22
0.2631579	0.0009553	QPF-23
0.2894737	0.0010000	QPF-13
0.3157895	0.0010175	QPF-9
0.3421053	0.0010199	QPF-16
0.3684210	0.0011154	QPF-12
0.3947369	0.0011635	QPF-28
0.4210526	0.0014000	QPF-1
0.4473684	0.0014200	QPF-1
0.4736842	0.0014266	QPF-32
0.5000000	0.0015064	QPF-21
0.5263159	0.0016000	QPF-36
0.5526316	0.0017000	QPF-18
0.5789474	0.0018000	QPF-6
0.6052632	0.0020000	QPF-26
0.6315789	0.0020700	QPF-25
0.6578947	0.0020800	QPF-34
0.6842105	0.0022000	QPF-8
0.7105263	0.0027000	QPF-2
0.7368421	0.0028000	QPF-17
0.7631579	0.0030000	QPF-37
0.7894737	0.0032000	QPF-20
0.8157895	0.0034155	QPF-5
0.8421053	0.0035001	QPF-30
0.8684211	0.0037200	QPF-31
0.8947369	0.0051900	QPF-35
0.9210526	0.0052000	QPF-14
0.9473684	0.0062000	QPF-3
0.9736842	0.0130400	QPF-38

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0006639	QPF-7
0.0526316	0.0010433	QPF-11
0.0789474	0.0011248	QPF-24
0.1052632	0.0017136	QPF-29
0.1315790	0.0017649	QPF-33
0.1578947	0.0019549	QPF-19
0.1842105	0.0023168	QPF-22
0.2105263	0.0024703	QPF-23
0.2368421	0.0025000	QPF-9
0.2631579	0.0026958	QPF-16
0.2894737	0.0027000	QPF-28
0.3157895	0.0030000	QPF-12
0.3421053	0.0032000	QPF-10
0.3684210	0.0043000	QPF-1
0.3947369	0.0045000	QPF-13
0.4210526	0.0050000	QPF-15
0.4473684	0.0052100	QPF-32
0.4736842	0.0053700	QPF-21
0.5000000	0.0063000	QPF-6
0.5263158	0.0088300	QPF-18
0.5526316	0.0100000	QPF-2
0.5789474	0.0104200	QPF-34
0.6052632	0.0113000	QPF-26
0.6315789	0.0121200	QPF-37
0.6578947	0.0123100	QPF-4
0.6842105	0.0134600	QPF-36
0.7105263	0.0152500	QPF-8
0.7368421	0.0155000	QPF-20
0.7631579	0.0157000	QPF-5
0.7894737	0.0160000	QPF-17
0.8157895	0.0166000	QPF-30
0.8421053	0.0180800	QPF-31
0.8684211	0.0200200	QPF-25
0.8947368	0.0212000	QPF-14
0.9210526	0.0235500	QPF-35
0.9473684	0.0306000	QPF-3
0.9736842	0.0409700	QPF-38

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0015205	QPF-7
0.0526316	0.0027791	QPF-11
0.0789474	0.0030749	QPF-24
0.1052632	0.0053807	QPF-29
0.1315790	0.0055924	QPF-33
0.1578947	0.0063862	QPF-19
0.1842105	0.0079347	QPF-22
0.2105263	0.0086029	QPF-23
0.2368421	0.0095927	QPF-16
0.2631579	0.0108000	QPF-9
0.2894737	0.0117000	QPF-10
0.3157895	0.0141000	QPF-12
0.3421053	0.0151000	QPF-1
0.3684210	0.0156100	QPF-28
0.3947369	0.0156100	QPF-32
0.4210526	0.0162200	QPF-6
0.4473684	0.0164000	QPF-13
0.4736842	0.0202000	QPF-15
0.5000000	0.0213900	QPF-21
0.5263158	0.0264400	QPF-18
0.5526316	0.0270000	QPF-2
0.5789474	0.0306000	QPF-34
0.6052632	0.0320900	QPF-37
0.6315789	0.0345500	QPF-26
0.6578947	0.0346700	QPF-36
0.6842105	0.0362900	QPF-20
0.7105263	0.0378400	QPF-4
0.7368421	0.0422800	QPF-31
0.7631579	0.0430200	QPF-5
0.7894737	0.0435600	QPF-30
0.8157895	0.0485000	QPF-17
0.8421053	0.0524000	QPF-14
0.8684211	0.0545500	QPF-25
0.8947368	0.0591100	QPF-35
0.9210526	0.0629600	QPF-8
0.9473684	0.1027500	QPF-38
0.9736842	0.1208000	QPF-3

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0046000	QPF-7
0.0526316	0.0100000	QPF-11
0.0789474	0.0113000	QPF-24
0.1052632	0.0217000	QPF-29
0.1315790	0.0226000	QPF-33
0.1578947	0.0260000	QPF-19
0.1842105	0.0326000	QPF-22
0.2105263	0.0335000	QPF-10
0.2368421	0.0347000	QPF-1
0.2631579	0.0353000	QPF-23
0.2894737	0.0373500	QPF-6
0.3157895	0.0390000	QPF-16
0.3421053	0.0403000	QPF-32
0.3684210	0.0413000	QPF-12
0.3947369	0.0425000	QPF-13
0.4210526	0.0427000	QPF-9
0.4473684	0.0454000	QPF-28
0.4736842	0.0481000	QPF-15
0.5000000	0.0576000	QPF-21
0.5263158	0.0640000	QPF-2
0.5526316	0.0683000	QPF-18
0.5789474	0.0735000	QPF-34
0.6052632	0.0747500	QPF-36
0.6315789	0.0759000	QPF-37
0.6578947	0.0782700	QPF-20
0.6842105	0.0812500	QPF-4
0.7105263	0.0826000	QPF-31
0.7368421	0.0956000	QPF-3
0.7631579	0.0982000	QPF-5
0.7894737	0.1016000	QPF-26
0.8157895	0.1116000	QPF-8
0.8421053	0.1262000	QPF-30
0.8684211	0.1509000	QPF-14
0.8947369	0.1513000	QPF-25
0.9210526	0.1552000	QPF-17
0.9473684	0.1695700	QPF-35
0.9736842	0.2955100	QPF-38

3.1.6 QIF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0714286	0.0002021	QIF-10	0.000
0.1428571	0.0003272	QIF-9	0.000
0.2142857	0.0003585	QIF-8	0.000
0.2857143	0.0004057	QIF-5	417.368
0.3571429	0.0004727	QIF-6	903.978
0.4285714	0.0005149	QIF-2	611.526
0.5000000	0.0007171	QIF-3	761.945
0.5714286	0.0007340	QIF-12	676.186
0.6428571	0.0007757	QIF-11	1068.323
0.7142857	0.0008004	QIF-7	422.757
0.7857143	0.0010113	QIF-13	957.199
0.8571429	0.0010472	QIF-4	1068.808
0.9285714	0.0015239	QIF-1	977.764

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0003809	QIF-10
0.1428571	0.0006402	QIF-9
0.2142857	0.0007102	QIF-8
0.2857143	0.0008205	QIF-5
0.3571429	0.0009500	QIF-2
0.4285714	0.0009665	QIF-6
0.5000000	0.0017000	QIF-3
0.5714286	0.0017108	QIF-12
0.6428571	0.0019004	QIF-7
0.7142857	0.0022800	QIF-4
0.7857143	0.0023100	QIF-13
0.8571429	0.0023500	QIF-11
0.9285714	0.0064200	QIF-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0007618	QIF-10
0.1428571	0.0014499	QIF-9
0.2142857	0.0016615	QIF-8
0.2857143	0.0021900	QIF-6
0.3571429	0.0022700	QIF-5
0.4285714	0.0036100	QIF-2
0.5000000	0.0067100	QIF-3
0.5714286	0.0068500	QIF-7
0.6428571	0.0068800	QIF-12
0.7142857	0.0081700	QIF-11
0.7857143	0.0128800	QIF-13
0.8571429	0.0135000	QIF-4
0.9285714	0.0209000	QIF-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0018235	QIF-10
0.1428571	0.0043173	QIF-9
0.2142857	0.0051674	QIF-8
0.2857143	0.0071800	QIF-5
0.3571429	0.0116800	QIF-2
0.4285714	0.0116800	QIF-6
0.5000000	0.0209700	QIF-11
0.5714286	0.0210300	QIF-3
0.6428571	0.0223500	QIF-12
0.7142857	0.0250300	QIF-7
0.7857143	0.0366300	QIF-4
0.8571429	0.0373000	QIF-13
0.9285714	0.0452500	QIF-1

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0050000	QIF-10
0.1428571	0.0160000	QIF-9
0.2142857	0.0200000	QIF-8
0.2857143	0.0220000	QIF-5
0.3571429	0.0281700	QIF-2
0.4285714	0.0403000	QIF-6
0.5000000	0.0451000	QIF-11
0.5714286	0.0473000	QIF-3
0.6428571	0.0531000	QIF-12
0.7142857	0.0749600	QIF-7
0.7857143	0.0902400	QIF-13
0.8571429	0.0969500	QIF-1
0.9285714	0.1029100	QIF-4

3.1.7 QPB

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0263158	0.0000605	QPB-2	234.693
0.0526316	0.0000736	QPB-21	168.451
0.0789474	0.0000925	QPB-34	126.945
0.1052632	0.0000977	QPB-16	180.774
0.1315790	0.0001038	QPB-1	289.791
0.1578947	0.0001040	QPB-22	232.411
0.1842105	0.0001101	QPB-33	159.106
0.2105263	0.0001271	QPB-9	402.182
0.2368421	0.0001373	QPB-5	236.968
0.2631579	0.0001476	QPB-3	338.489
0.2894737	0.0001697	QPB-12	300.594
0.3157895	0.0001718	QPB-26	382.900
0.3421053	0.0001734	QPB-18	56.498
0.3684210	0.0001753	QPB-25	70.108
0.3947369	0.0001787	QPB-4	199.988
0.4210526	0.0001884	QPB-14	246.687
0.4473684	0.0001917	QPB-8	133.976
0.4736842	0.0001938	QPB-29	80.455
0.5000000	0.0002082	QPB-23	255.928
0.5263158	0.0002140	QPB-28	37.851
0.5526316	0.0002193	QPB-15	175.056
0.5789474	0.0002194	QPB-27	114.235
0.6052632	0.0002308	QPB-39	42.441
0.6315789	0.0002654	QPB-38	140.202
0.6578947	0.0002726	QPB-30	136.152
0.6842105	0.0002738	QPB-36	107.628
0.7105263	0.0002920	QPB-13	45.800
0.7368421	0.0002939	QPB-19	66.190
0.7631579	0.0003025	QPB-11	60.037
0.7894737	0.0003126	QPB-6	105.059
0.8157895	0.0003312	QPB-10	225.807
0.8421053	0.0003453	QPB-24	114.948
0.8684211	0.0004587	QPB-7	78.666
0.8947368	0.0006473	QPB-17	15.325
0.9210526	0.0007483	QPB-20	179.169
0.9473684	0.0009100	QPB-37	55.934
0.9736842	0.0010939	QPB-32	102.307

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0000860	QPB-1
0.0526316	0.0000872	QPB-16
0.0789474	0.0000872	QPB-34
0.1052632	0.0001016	QPB-33
0.1315790	0.0001064	QPB-22
0.1578947	0.0001227	QPB-9
0.1842105	0.0001431	QPB-5
0.2105263	0.0001562	QPB-3
0.2368421	0.0001632	QPB-12
0.2631579	0.0001692	QPB-25
0.2894737	0.0001719	QPB-26
0.3157895	0.0001762	QPB-8
0.3421053	0.0001787	QPB-18
0.3684210	0.0001787	QPB-4
0.3947369	0.0001814	QPB-21
0.4210526	0.0001843	QPB-14
0.4473684	0.0001931	QPB-29
0.4736842	0.0002188	QPB-27
0.5000000	0.0002238	QPB-15
0.5263158	0.0002249	QPB-28
0.5526316	0.0002308	QPB-33
0.5789474	0.0002358	QPB-39
0.6052632	0.0002444	QPB-2
0.6315789	0.0002906	QPB-13
0.6578947	0.0003025	QPB-36
0.6842105	0.0003122	QPB-17
0.7105263	0.0003138	QPB-11
0.7368421	0.0003138	QPB-7
0.7631579	0.0003208	QPB-6
0.7894737	0.0003320	QPB-38
0.8157895	0.0003570	QPB-10
0.8421053	0.0003858	QPB-24
0.8684211	0.0005711	QPB-7
0.8947368	0.0009202	QPB-17
0.9210526	0.0011704	QPB-37
0.9473684	0.0014475	QPB-20
0.9736842	0.0026332	QPB-32

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0001140	QPB-2
0.0526316	0.0001518	QPB-21
0.0789474	0.0002040	QPB-1
0.1052632	0.0002067	QPB-16
0.1315790	0.0002067	QPB-34
0.1578947	0.0002421	QPB-33
0.1842105	0.0002989	QPB-9
0.2105263	0.0004515	QPB-25
0.2368421	0.0004781	QPB-8
0.2631579	0.0004879	QPB-18
0.2894737	0.0005461	QPB-29
0.3157895	0.0006200	QPB-22
0.3421053	0.0006595	QPB-27
0.3684210	0.0006828	QPB-15
0.3947369	0.0006877	QPB-28
0.4210526	0.0007401	QPB-32
0.4473684	0.0010261	QPB-13
0.4736842	0.0011000	QPB-5
0.5000000	0.0011480	QPB-19
0.5263158	0.0011575	QPB-11
0.5526316	0.0011990	QPB-3
0.5789474	0.0015200	QPB-3
0.6052632	0.0017000	QPB-4
0.6315789	0.0018000	QPB-12
0.6578947	0.0021000	QPB-30
0.6842105	0.0022000	QPB-14
0.7105263	0.0022000	QPB-23
0.7368421	0.0025000	QPB-36
0.7631579	0.0025000	QPB-35
0.7894737	0.0030000	QPB-26
0.8157895	0.0039000	QPB-24
0.8421053	0.0044000	QPB-10
0.8684211	0.0055000	QPB-7
0.8947368	0.0072070	QPB-37
0.9210526	0.0080000	QPB-17
0.9473684	0.0140000	QPB-20
0.9736842	0.0173000	QPB-32

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0002747	QPB-2
0.0526316	0.0003896	QPB-21
0.0789474	0.0005927	QPB-1
0.1052632	0.0006047	QPB-16
0.1315790	0.0006047	QPB-34
0.1578947	0.0007711	QPB-33
0.1842105	0.0008330	QPB-22
0.2105263	0.0010727	QPB-9
0.2368421	0.0014386	QPB-5
0.2631579	0.0017152	QPB-3
0.2894737	0.0018752	QPB-12
0.3157895	0.0020204	QPB-25
0.3421053	0.0020689	QPB-26
0.3684210	0.0021591	QPB-8
0.3947369	0.0022659	QPB-18
0.4210526	0.0022660	QPB-4
0.4473684	0.0024193	QPB-14
0.4736842	0.0026674	QPB-20
0.5000000	0.0034763	QPB-27
0.5263158	0.0036459	QPB-15
0.5526316	0.0036819	QPB-23
0.5789474	0.0038859	QPB-24
0.6052632	0.0040653	QPB-28
0.6315789	0.0062008	QPB-13
0.6578947	0.0067036	QPB-36
0.6842105	0.0071135	QPB-17
0.7105263	0.0071896	QPB-11
0.7368421	0.0071907	QPB-30
0.7631579	0.0074846	QPB-6
0.7894737	0.0079998	QPB-38
0.8157895	0.0085601	QPB-10
0.8421053	0.0104510	QPB-24
0.8684211	0.0132981	QPB-7
0.8947368	0.0350042	QPB-17
0.9210526	0.0449006	QPB-37
0.9473684	0.0546313	QPB-20
0.9736842	0.0659009	QPB-32

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0009394	QPB-2
0.0526316	0.0029000	QPB-21
0.0789474	0.0032000	QPB-34
0.1052632	0.0045000	QPB-16
0.1315790	0.0053000	QPB-22
0.1578947	0.0064000	QPB-33
0.1842105	0.0072000	QPB-9
0.2105263	0.0075000	QPB-1
0.2368421	0.0089000	QPB-5
0.2631579	0.0090000	QPB-26
0.2894737	0.0091000	QPB-3
0.3157895	0.0122000	QPB-14
0.3421053	0.0125000	QPB-4
0.3684210	0.0125000	QPB-18
0.3947369	0.0129000	QPB-12
0.4210526	0.0130000	QPB-25
0.4473684	0.0143000	QPB-23
0.4736842	0.0162000	QPB-8
0.5000000	0.0162000	QPB-15
0.5263158	0.0166000	QPB-29
0.5526316	0.0169000	QPB-27
0.5789474	0.0200000	QPB-20
0.6052632	0.0210000	QPB-38
0.6315789	0.0229000	QPB-39
0.6578947	0.0249000	QPB-36
0.6842105	0.0260000	QPB-70
0.7105263	0.0273000	QPB-10
0.7368421	0.0290000	QPB-11
0.7631579	0.0394000	QPB-19
0.7894737	0.0301000	QPB-6
0.8157895	0.0329000	QPB-24
0.8421053	0.0330000	QPB-13
0.8684211	0.0470000	QPB-7
0.8947369	0.0918000	QPB-17
0.9210526	0.0971000	QPB-37
0.9473684	0.1100000	QPB-20
0.9736842	0.1702000	QPB-32

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0055495	QPB-2
0.0526316	0.0106286	QPB-21
0.0789474	0.0203229	QPB-1
0.1052632	0.0203943	QPB-16
0.1315790	0.0208948	QPB-34
0.1578947	0.0285527	WPB-33
0.1842105	0.0312838	QPB-22
0.2105263	0.0411630	QPB-9
0.2368421	0.0543390	QPB-5
0.2631579	0.0629884	QPB-3
0.2894737	0.0675631	QPB-12
0.3157895	0.0714744	QPB-25
0.3421053	0.0732469	QPB-26
0.3684210	0.0760071	QPB-8
0.3947369	0.0776282	QPB-18
0.4210526	0.0776299	QPB-4
0.4473684	0.0812058	QPB-14
0.4736842	0.0866223	QPB-29
0.5000000	0.1016536	QPB-27
0.5263158	0.1043916	QPB-15
0.5526316	0.1049597	QPB-28
0.5789474	0.1080647	QPB-23
0.6052632	0.1006798	QPB-39
0.6315789	0.1349124	QPB-13
0.6578947	0.1393089	QPB-36
0.6842105	0.1426685	QPB-19
0.7105263	0.1432219	QPB-11
0.7368421	0.1432289	QPB-30
0.7631579	0.1455233	QPB-6
0.7894736	0.1490455	QPB-38
0.8157895	0.1588401	QPB-10
0.8421053	0.1634132	QPB-24
0.8684211	0.1933264	QPB-7
0.8947368	0.2198048	QPB-17
0.9210526	0.2135775	QPB-37
0.9473684	0.2421257	QPB-20
0.9736842	0.2778250	QPB-32

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0111000	QPB-2
0.0526316	0.0177000	QPB-21
0.0789474	0.0262000	QPB-1
0.1052632	0.0282000	QPB-22
0.1315790	0.0290000	QPB-16
0.1573947	0.0297000	QPB-9
0.1842105	0.0325000	QPB-34
0.2105263	0.0381000	QPB-33
0.2368421	0.0402000	QPB-3
0.2631579	0.0449000	QPB-5
0.2894737	0.0505000	QPB-12
0.3157895	0.0623000	QPB-26
0.3421053	0.0788000	QPB-14
0.3684210	0.0812000	QPB-4
0.3947369	0.0850000	QPB-23
0.4210526	0.0936000	QPB-8
0.4473684	0.1100000	QPB-20
0.4736842	0.1204000	QPB-25
0.5000000	0.1258000	QPB-18
0.5263158	0.1360000	QPB-29
0.5526316	0.1430000	QPB-10
0.5789474	0.1451000	QPB-36
0.6052632	0.1470000	QPB-27
0.6315789	0.1643000	QPB-15
0.6578947	0.1659000	QPB-39
0.6842105	0.1816000	QPB-22
0.7105263	0.1990000	QPB-38
0.7368421	0.2170000	QPB-6
0.7631579	0.2369000	QPB-11
0.7894737	0.2410000	QPB-19
0.8157895	0.2530000	QPB-24
0.8421053	0.2835147	QPB-7
0.8684211	0.2837000	QPB-13
0.8947368	0.3471703	QPB-17
0.9210526	0.3905895	QPB-37
0.9473684	0.4367223	QPB-20
0.9736842	0.6114294	QPB-32

3.1.8 QIB

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0769231	0.0000684	QIB-2	225.475
0.1538462	0.0001120	QIB-7	73.555
0.2307692	0.0001246	QIB-10	0.000
0.3076923	0.0001314	QIB-8	66.932
0.3846154	0.0001352	QIB-12	0.000
0.4615385	0.0001595	QIB-9	50.443
0.5384616	0.0002028	QIB-5	197.908
0.6153846	0.0002661	QIB-6	191.608
0.6923077	0.0002812	QIB-1	62.624
0.7692308	0.0004791	QIB-3	42.286
0.8461539	0.0006671	QIB-11	90.435
0.9230769	0.0008087	QIB-4	194.944

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0001015	QIB-7
0.1538462	0.0001228	QIB-10
0.2307692	0.0001321	QIB-8
0.3076923	0.0001329	QIB-12
0.3846154	0.0001481	QIB-9
0.4615385	0.0001971	QIB-2
0.5384616	0.0002301	QIB-5
0.6153846	0.0003588	QIB-1
0.6923077	0.0003861	QIB-6
0.7692308	0.0006661	QIB-3
0.8461539	0.0011832	QIB-11
0.9230769	0.0016638	QIB-4

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0001399	QIB-2
0.1538462	0.0002419	QIB-7
0.2307692	0.0002992	QIB-10
0.3076923	0.0003265	QIB-8
0.3846154	0.0003288	QIB-12
0.4615385	0.0003770	QIB-9
0.5384616	0.0019000	QIB-5
0.6153846	0.0024000	QIB-1
0.6923077	0.0024000	QIB-6
0.7692308	0.0047000	QIB-3
0.8461539	0.0089000	QIB-11
0.9230769	0.0131000	QIB-4

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0003507	QIB-2
0.1538462	0.0007699	QIB-7
0.2307692	0.0010745	QIB-10
0.3076923	0.0012316	QIB-8
0.3846154	0.0012453	QIB-12
0.4615385	0.0015386	QIB-9
0.5384616	0.0038631	QIB-5
0.6153846	0.0092010	QIB-1
0.6923077	0.0104623	QIB-6
0.7692308	0.0237712	QIB-3
0.8461539	0.0453781	QIB-11
0.9230769	0.0614556	QIB-4

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0028000	QIB-2
0.1538462	0.0058000	QIB-7
0.2307692	0.0058100	QIB-8
0.3076923	0.0065700	QIB-10
0.3846154	0.0078200	QIB-12
0.4615385	0.0100000	QIB-9
0.5384616	0.0113000	QIB-5
0.6153846	0.0154000	QIB-6
0.6923077	0.0300000	QIB-1
0.7692308	0.0749000	QIB-3
0.8461539	0.1268000	QIB-11
0.9230769	0.1801000	QIB-4

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0088308	QIB-2
0.1538462	0.0285002	QIB-7
0.2307692	0.0412395	QIB-10
0.3076923	0.0471538	QIB-8
0.3846154	0.0476497	QIB-12
0.4615385	0.0575811	QIB-9
0.5384616	0.1077237	QIB-5
0.6153846	0.1566801	QIB-1
0.6923077	0.1634675	QIB-6
0.7692308	0.2026949	QIB-3
0.8461539	0.2320948	QIB-11
0.9230769	0.2494196	QIB-4

CUM PROB	CRACK DEPTH	SPECIMEN
0.0769231	0.0125000	QIB-2
0.1538462	0.0615000	QIB-7
0.2307692	0.1180000	QIB-8
0.3076923	0.1300000	QIB-9
0.3846154	0.1381334	QIB-10
0.4615385	0.1480002	QIB-12
0.5384616	0.1519000	QIB-5
0.6153846	0.2413443	QIB-1
0.6923077	0.2471841	QIB-6
0.7692308	0.3012397	QIB-3
0.8461539	0.3927432	QIB-11
0.9230769	0.4712798	QIB-4

3.1.9 ZWPT

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0322581	0.0000994	ZWPF-19	0.000
0.0645161	0.0001004	ZWPF-12	0.000
0.0967742	0.0001020	ZWPF-26	0.000
0.1290323	0.0001040	ZWPF-13	0.000
0.1612903	0.0001113	ZWPF-16	0.000
0.1935484	0.0001140	ZWPF-17	0.000
0.2258064	0.0001224	ZWPF-11	0.000
0.2580645	0.0001277	ZWPF-15	0.000
0.2903226	0.0001868	ZWPF-9	0.000
0.3225806	0.0002388	ZWPF-22	0.000
0.3548387	0.0002500	ZWPF-25	0.000
0.3870968	0.0002643	ZWPF-21	0.000
0.4193548	0.0002779	ZWPF-4	0.000
0.4516129	0.0003119	ZWPF-7	0.000
0.4838710	0.0003177	ZWPF-20	0.000
0.5161290	0.0003203	ZWPF-23	0.000
0.5483871	0.0003381	ZWPF-3	0.000
0.5806451	0.0003405	ZWPF-18	0.000
0.6129032	0.0003503	ZWPF-24	0.000
0.6451613	0.0003527	ZWPF-28	0.000
0.6774194	0.0003576	ZWPF-14	0.000
0.7096774	0.0003578	ZWPF-8	0.000
0.7419355	0.0004194	ZWPF-27	0.000
0.7741935	0.0004341	ZWPF-2	0.000
0.8064516	0.0004447	ZWPF-1	0.000
0.8387097	0.0004651	ZWPF-29	0.000
0.8709677	0.0004692	ZWPF-5	0.000
0.9032258	0.0005346	ZWPF-6	0.000
0.9354839	0.0005695	ZWPF-30	0.000
0.9677419	0.0007974	ZWPF-10	0.000

CUM PROB	CRACK DEPTH	SPECIMEN
0.0322581	0.0001385	ZWPF-19
0.0645161	0.0001478	ZWPF-12
0.0967742	0.0001562	ZWPF-26
0.1290323	0.0001638	ZWPF-13
0.1612903	0.0001866	ZWPF-16
0.1935484	0.0001948	ZWPF-17
0.2258064	0.0002149	ZWPF-11
0.2580645	0.0002272	ZWPF-15
0.2903226	0.0003503	ZWPF-9
0.3225806	0.0004545	ZWPF-22
0.3548387	0.0004772	ZWPF-25
0.3870968	0.0005065	ZWPF-21
0.4193548	0.0005347	ZWPF-4
0.4516129	0.0006069	ZWPF-7
0.4838710	0.0006195	ZWPF-20
0.5161290	0.0006251	ZWPF-23
0.5483871	0.0006643	ZWPF-3
0.5806451	0.0006698	ZWPF-18
0.6129032	0.0006916	ZWPF-24
0.6451613	0.0006971	ZWPF-28
0.6774194	0.0007083	ZWPF-14
0.7096774	0.0007087	ZWPF-8
0.7419355	0.0008535	ZWPF-27
0.7741935	0.0008894	ZWPF-2
0.8064516	0.0009157	ZWPF-1
0.8387097	0.0009673	ZWPF-29
0.8709677	0.0009792	ZWPF-5
0.9032258	0.0011505	ZWPF-6
0.9354839	0.0012466	ZWPF-30
0.9677419	0.0019378	ZWPF-10

CUM PROB	CRACK DEPTH	SPECIMEN
0.0322581	0.0002510	ZWPF-19
0.0645161	0.0002709	ZWPF-12
0.0967742	0.0002883	ZWPF-26
0.1290323	0.0003039	ZWPF-13
0.1612903	0.0003499	ZWPF-16
0.1935484	0.0003647	ZWPF-17
0.2258064	0.0004064	ZWPF-11
0.2580645	0.0004312	ZWPF-15
0.2903226	0.0006916	ZWPF-9
0.3225806	0.0009405	ZWPF-22
0.3548387	0.0009984	ZWPF-25
0.3870968	0.0010750	ZWPF-21
0.4193548	0.0011506	ZWPF-4
0.4516129	0.0013529	ZWPF-7
0.4838710	0.0013892	ZWPF-20
0.5161290	0.0014058	ZWPF-23
0.5483871	0.0015218	ZWPF-3
0.5806451	0.0015383	ZWPF-18
0.6129032	0.0016046	ZWPF-24
0.6451613	0.0016211	ZWPF-28
0.6774194	0.0016556	ZWPF-14
0.7096774	0.0016568	ZWPF-8
0.7419355	0.0021221	ZWPF-27
0.7741935	0.0022427	ZWPF-2
0.8064516	0.0023321	ZWPF-1
0.8387097	0.0025107	ZWPF-29
0.8709677	0.0025520	ZWPF-5
0.9032258	0.0031695	ZWPF-6
0.9354839	0.0035295	ZWPF-30
0.9677419	0.0063140	ZWPF-10

CUM PROB	CRACK DEPTH	SPECIMEN
0.0322581	0.0004793	ZWPF-19
0.0645161	0.0005202	ZWPF-12
0.0967742	0.0005566	ZWPF-26
0.1290323	0.0005898	ZWPF-13
0.1612903	0.0006909	ZWPF-16
0.1935484	0.0007245	ZWPF-17
0.2258064	0.0008221	ZWPF-11
0.2580645	0.0008823	ZWPF-15
0.2903226	0.0016045	ZWPF-9
0.3225806	0.0024173	ZWPF-22
0.3548387	0.0026195	ZWPF-25
0.3870968	0.0028931	ZWPF-21
0.4193548	0.0031699	ZWPF-4
0.4516129	0.0039372	ZWPF-7
0.4838710	0.0040788	ZWPF-20
0.5161290	0.0041435	ZWPF-23
0.5483871	0.0046028	ZWPF-3
0.5806451	0.0046691	ZWPF-18
0.6129032	0.0049360	ZWPF-24
0.6451613	0.0050031	ZWPF-28
0.6774194	0.0051436	ZWPF-14
0.7096774	0.0051484	ZWPF-8
0.7419355	0.0070965	ZWPF-27
0.7741935	0.0076145	ZWPF-2
0.8064516	0.0080012	ZWPF-1
0.8387097	0.0087775	ZWPF-29
0.8709677	0.0089604	ZWPF-5
0.9032258	0.0116970	ZWPF-6
0.9354839	0.0133091	ZWPF-30
0.9677419	0.0256672	ZWPF-10

CUM PROB	CRACK DEPTH	SPECIMEN
0.0322581	0.0010000	ZWPF-19
0.0645161	0.0011100	ZWPF-12
0.0967742	0.0012000	ZWPF-26
0.1290323	0.0013000	ZWPF-13
0.1612903	0.0016000	ZWPF-16
0.1935484	0.0017000	ZWPF-17
0.2258064	0.0020000	ZWPF-11
0.2580645	0.0022000	ZWPF-15
0.2903226	0.0049500	ZWPF-9
0.3225806	0.0084000	ZWPF-22
0.3548387	0.0093000	ZWPF-25
0.3870968	0.0105000	ZWPF-21
0.4193548	0.0117200	ZWPF-4
0.4516129	0.0150400	ZWPF-7
0.4838710	0.0157000	ZWPF-20
0.5161290	0.0160000	ZWPF-23
0.5483871	0.0181000	ZWPF-3
0.5806451	0.0184000	ZWPF-18
0.6129032	0.0196000	ZWPF-24
0.6451613	0.0199000	ZWPF-28
0.6774194	0.0207000	ZWPF-14
0.7096774	0.0207200	ZWPF-8
0.7419355	0.0292000	ZWPF-27
0.7741935	0.0313000	ZWPF-2
0.8064516	0.0328700	ZWPF-1
0.8387097	0.0360000	ZWPF-29
0.8709677	0.0367300	ZWPF-5
0.9032258	0.0476000	ZWPF-6
0.9354839	0.0530000	ZWPF-30
0.9677419	0.0859700	ZWPF-10

3.2 TASK II

3.2.1 XWPF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0263158	0.0000992	XWPF-20	370.162
0.0526316	0.0001809	XWPF-10	1028.881
0.0789474	0.0001871	XWPF-14	815.549
0.1052632	0.0002041	XWPF-26	583.748
0.1315790	0.0002186	XWPF-23	234.628
0.1578947	0.0002234	XWPF-35	909.402
0.1842105	0.0002235	XWPF-4	1204.732
0.2105263	0.0002326	XWPF-37	563.452
0.2368421	0.0002410	XWPF-13	586.857
0.2631579	0.0002429	XWPF-6	1144.803
0.2894737	0.0002488	XWPF-21	1076.590
0.3157895	0.0002503	XWPF-27	602.964
0.3421053	0.0002525	XWPF-28	468.598
0.3684210	0.0002592	XWPF-17	551.560
0.3947369	0.0002607	XWPF-33	1032.939
0.4210526	0.0002653	XWPF-19	290.945
0.4473684	0.0002665	XWPF-30	284.161
0.4736842	0.0002803	XWPF-25	1581.840
0.5000000	0.0003168	XWPF-12	322.837
0.5263158	0.0003275	XWPF-5	1056.670
0.5526316	0.0003421	XWPF-11	426.991
0.5789474	0.0003521	XWPF-2	335.253
0.6052632	0.0003746	XWPF-16	817.674
0.6315789	0.0004191	XWPF-24	1378.253
0.6578947	0.0004829	XWPF-29	855.571
0.6842105	0.0005128	XWPF-22	377.889
0.7105263	0.0005160	XWPF-1	1210.525
0.7368421	0.0005377	XWPF-15	371.642
0.7631579	0.0005600	XWPF-8	743.631
0.7894737	0.0005695	XWPF-34	218.013
0.8157895	0.0005828	XWPF-3	122.707
0.8421053	0.0006166	XWPF-31	553.349
0.8684211	0.0006277	XWPF-7	291.702
0.8947368	0.0007015	XWPF-18	481.572
0.9210526	0.0007023	XWPF-9	246.651
0.9473684	0.0012606	XWPF-38	605.658
0.9736842	0.0013870	XWPF-36	496.284

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0002311	XWPF-20
0.0526316	0.0005546	XWPF-10
0.0789474	0.0006827	XWPF-26
0.1052632	0.0008374	XWPF-14
0.1315790	0.0008549	XWPF-33
0.1578947	0.0009000	XWPF-37
0.1842105	0.0009079	XWPF-13
0.2105263	0.0011000	XWPF-27
0.2368421	0.0011148	XWPF-23
0.2631579	0.0012000	XWPF-17
0.2894737	0.0012000	XWPF-30
0.3157895	0.0013000	XWPF-19
0.3421053	0.0013000	XWPF-28
0.3684210	0.0013000	XWPF-35
0.3947369	0.0013965	XWPF-12
0.4210526	0.0014276	XWPF-2
0.4473684	0.0016079	XWPF-29
0.4736842	0.0017000	XWPF-21
0.5000000	0.0018000	XWPF-6
0.5263158	0.0019000	XWPF-4
0.5526316	0.0021000	XWPF-11
0.5789474	0.0023000	XWPF-5
0.6052632	0.0028000	XWPF-16
0.6315789	0.0028000	XWPF-25
0.6578947	0.0032000	XWPF-22
0.6842105	0.0037000	XWPF-3
0.7105263	0.0037000	XWPF-15
0.7368421	0.0038000	XWPF-7
0.7631579	0.0039000	XWPF-34
0.7894737	0.0040000	XWPF-18
0.8157895	0.0041000	XWPF-24
0.8421053	0.0050000	XWPF-8
0.8684211	0.0051000	XWPF-31
0.8947368	0.0054709	XWPF-9
0.9210526	0.0056000	XWPF-1
0.9473684	0.0125000	XWPF-38
0.9736842	0.0141000	XWPF-36

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0010000	XWPF-20
0.0526316	0.0026000	XWPF-14
0.0789474	0.0037000	XWPF-10
0.1052632	0.0050000	XWPF-4
0.1315790	0.0053000	XWPF-26
0.1578947	0.0055000	XWPF-23
0.1842105	0.0059000	XWPF-13
0.2105263	0.0060000	XWPF-35
0.2368421	0.0063000	XWPF-28
0.2631579	0.0070000	XWPF-30
0.2894737	0.0075000	XWPF-37
0.3157895	0.0079000	XWPF-19
0.3421053	0.0079000	XWPF-21
0.3684210	0.0080000	XWPF-27
0.3947369	0.0081000	XWPF-6
0.4210526	0.0087000	XWPF-33
0.4473684	0.0090000	XWPF-17
0.4736842	0.0093000	XWPF-25
0.5000000	0.0102000	XWPF-11
0.5263158	0.0112000	XWPF-12
0.5526316	0.0116000	XWPF-16
0.5789474	0.0118000	XWPF-5
0.6052632	0.0144000	XWPF-24
0.6315789	0.0148000	XWPF-2
0.6578947	0.0176000	XWPF-22
0.6842105	0.0190000	XWPF-15
0.7105263	0.0220000	XWPF-8
0.7368421	0.0225000	XWPF-34
0.7631579	0.0233000	XWPF-1
0.7894737	0.0252000	XWPF-29
0.8157895	0.0253000	XWPF-3
0.8421053	0.0259000	XWPF-31
0.8684211	0.0345000	XWPF-7
0.8947368	0.0370000	XWPF-9
0.9210526	0.0380000	XWPF-18
0.9473684	0.0464000	XWPF-36
0.9736842	0.0513000	XWPF-38

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263158	0.0060000	XWPF-20
0.0526316	0.0155000	XWPF-10
0.0789474	0.0223000	XWPF-26
0.1052632	0.0229000	XWPF-4
0.1315790	0.0250000	XWPF-35
0.1578947	0.0269000	XWPF-25
0.1842105	0.0275000	XWPF-21
0.2105263	0.0292000	XWPF-6
0.2368421	0.0295000	XWPF-33
0.2631579	0.0309000	XWPF-37
0.2894737	0.0332000	XWPF-17
0.3157895	0.0336000	XWPF-27
0.3421053	0.0364000	XWPF-5
0.3684210	0.0384000	XWPF-28
0.3947368	0.0399000	XWPF-24
0.4210526	0.0403000	XWPF-23
0.4473684	0.0418000	XWPF-19
0.4736842	0.0438244	XWPF-13
0.5000000	0.0470000	XWPF-1
0.5263158	0.0529000	XWPF-11
0.5526316	0.0556000	XWPF-29
0.5789474	0.0564000	XWPF-2
0.6052632	0.0576000	XWPF-30
0.6315789	0.0645038	XWPF-12
0.6578947	0.0653000	XWPF-31
0.6842105	0.0714000	XWPF-14
0.7105263	0.0777502	XWPF-16
0.7368421	0.0825000	XWPF-15
0.7631579	0.0870000	XWPF-22
0.7894737	0.1045440	XWPF-8
0.8157895	0.1101000	XWPF-36
0.8421053	0.1171000	XWPF-38
0.8684211	0.1253000	XWPF-9
0.8947368	0.1253000	XWPF-34
0.9210526	0.1322000	XWPF-18
0.9473684	0.1481000	XWPF-3
0.9736842	0.1559000	XWPF-7

CUM PROB	CRACK DEPTH	SPECIMEN
0.0263153	0.0299000	XWPF-20
0.0526316	0.0670000	XWPF-6
0.0789474	0.0690000	XWPF-25
0.1052632	0.0760000	XWPF-21
0.1315790	0.0817000	XWPF-35
0.1578947	0.0838000	XWPF-27
0.1842105	0.0910000	XWPF-1
0.2105263	0.0980000	XWPF-33
0.2368421	0.0992000	XWPF-5
0.2631579	0.1004000	XWPF-10
0.2894737	0.1016000	XWPF-24
0.3157895	0.1034000	XWPF-4
0.3421053	0.1125000	XWPF-19
0.3684210	0.1138000	XWPF-37
0.3947369	0.1316000	XWPF-17
0.4210526	0.1318000	XWPF-26
0.4473684	0.1319586	XWPF-14
0.4736842	0.1333000	XWPF-11
0.5000000	0.1347000	XWPF-31
0.5263158	0.1360114	XWPF-13
0.5526316	0.1383000	XWPF-29
0.5789474	0.1453856	XWPF-23
0.6052632	0.1543610	XWPF-12
0.6315789	0.1549587	XWPF-30
0.6578947	0.1638272	XWPF-15
0.6842105	0.1739000	XWPF-2
0.7105263	0.1870564	XWPF-8
0.7368421	0.1872405	XWPF-22
0.7631579	0.2166821	XWPF-18
0.7894737	0.2370540	XWPF-3
0.8157895	0.2433000	XWPF-28
0.8421053	0.2580733	XWPF-7
0.8684211	0.2665000	XWPF-15
0.8947368	0.2798529	XWPF-36
0.9210526	0.2953000	XWPF-38
0.9473684	0.3030000	XWPF-34
0.9736842	0.3149000	XWPF-9

3.2.2 XWPB

TEST SERIES: XWPB

NO.	EIFS	CUM PROB
1	0.022	0.0323
2	0.024	0.0645
3	0.038	0.0958
4	0.034	0.1299
5	0.035	0.1613
6	0.039	0.1935
7	0.039	0.2293
8	0.042	0.2591
9	0.042	0.2903
10	0.044	0.3225
11	0.044	0.3548
12	0.046	0.3871
13	0.055	0.4194
14	0.058	0.4516
15	0.051	0.4839
16	0.053	0.5161
17	0.053	0.5484
18	0.094	0.5896
19	0.123	0.6129
20	0.123	0.6452
21	0.139	0.6774
22	0.145	0.7097
23	0.168	0.7419
24	0.229	0.7742
25	0.228	0.8055
26	0.438	0.8387
27	0.616	0.8710
28	0.628	0.9032
29	0.928	0.9355
30	1.070	0.9677

3.2.3 XQPF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0256410	0.0000091	XQPF-23	0.000
0.0512821	0.0000271	XQPF-3	0.000
0.0769231	0.0000469	XQPF-14	0.000
0.1025641	0.0000475	XQPF-1	0.000
0.1282051	0.0000493	XQPF-22	0.000
0.1538462	0.0000583	XQPF-16	0.000
0.1794872	0.0000585	XQPF-20	0.000
0.2051282	0.0000599	XQPF-37	0.000
0.2307692	0.0000664	XQPF-17	0.000
0.2564103	0.0000664	XQPF-18	0.000
0.2820513	0.0000671	XQPF-15	0.000
0.3076923	0.0000707	XQPF-10	0.000
0.3333333	0.0000707	XQPF-11	0.000
0.3589744	0.0000719	XQPF-5	0.000
0.3846154	0.0000944	XQPF-13	443.102
0.4102564	0.0001139	XQPF-19	1369.017
0.4358974	0.0001340	XQPF-21	1181.869
0.4615385	0.0001688	XQPF-24	1717.311
0.4871795	0.0001701	XQPF-2	855.180
0.5128205	0.0002074	XQPF-29	2180.192
0.5384616	0.0002083	XQPF-12	2094.326
0.5641026	0.0002093	XQPF-6	788.419
0.5897436	0.0002109	XQPF-36	1365.119
0.6153846	0.0002283	XQPF-26	2432.163
0.6410257	0.0002667	XQPF-25	890.506
0.6666667	0.0003328	XQPF-4	1511.194
0.6923077	0.0003751	XQPF-27	882.393
0.7179487	0.0005942	XQPF-9	987.326
0.7435893	0.0006009	XQPF-31	502.198
0.7692308	0.0006029	XQPF-30	761.541
0.7948718	0.0006580	XQPF-35	572.604
0.8205128	0.0008454	XQPF-34	969.157
0.8461539	0.0009540	XQPF-28	1372.311
0.8717949	0.0009905	XQPF-33	266.887
0.8974359	0.0010975	XQPF-32	78.522
0.9230769	0.0011985	XQPF-38	1028.827
0.9487180	0.0013263	XQPF-7	733.851
0.9743590	0.0030380	XQPF-8	249.389

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0000555	XQPF-3
0.0512821	0.0000973	XQPF-14
0.0769231	0.0000984	XQPF-1
0.1025641	0.0001023	XQPF-22
0.1282051	0.0001214	XQPF-16
0.1538462	0.0001218	XQPF-20
0.1794872	0.0001249	XQPF-37
0.2051282	0.0001398	XQPF-17
0.2307692	0.0001398	XQPF-18
0.2564103	0.0001414	XQPF-15
0.2820513	0.0001501	XQPF-10
0.3076923	0.0001501	XQPF-11
0.3333333	0.0001530	XQPF-5
0.3589744	0.0002145	XQPF-13
0.3846154	0.0002788	XQPF-19
0.4102564	0.0003558	XQPF-21
0.4358974	0.0005117	XQPF-24
0.4615385	0.0006000	XQPF-2
0.4871795	0.0006369	XQPF-36
0.5128205	0.0006419	XQPF-6
0.5384616	0.0007131	XQPF-29
0.5641026	0.0007718	XQPF-25
0.5897436	0.0008325	XQPF-26
0.6153846	0.0010852	XQPF-27
0.6410257	0.0011165	XQPF-4
0.6666667	0.0020000	XQPF-12
0.6923077	0.0020224	XQPF-9
0.7179487	0.0024557	XQPF-30
0.7435898	0.0025823	XQPF-34
0.7692308	0.0032448	XQPF-35
0.7948718	0.0047000	XQPF-31
0.8205128	0.0075715	XQPF-33
0.8461539	0.0090078	XQPF-32
0.8717949	0.0095086	XQPF-7
0.8974359	0.0168600	XQPF-38
0.9230769	0.0176000	XQPF-28
0.9487180	0.0245000	XQPF-8
0.9743590	0.1390000	XQPF-23

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0001154	XQPF-3
0.0512821	0.0002232	XQPF-14
0.0769231	0.0002268	XQPF-1
0.1025641	0.0002390	XQPF-22
0.1282051	0.0003061	XQPF-16
0.1538462	0.0003077	XQPF-20
0.1794872	0.0003195	XQPF-37
0.2051282	0.0003796	XQPF-17
0.2307692	0.0003796	XQPF-18
0.2564103	0.0003867	XQPF-15
0.2820513	0.0004244	XQPF-10
0.3076923	0.0004244	XQPF-11
0.3333333	0.0004376	XQPF-5
0.3589744	0.0007529	XQPF-13
0.3846154	0.0011442	XQPF-19
0.4102564	0.0016683	XQPF-21
0.4358974	0.0038587	XQPF-36
0.4615385	0.0040000	XQPF-2
0.4871795	0.0049861	XQPF-25
0.5128205	0.0063000	XQPF-24
0.5384616	0.0072000	XQPF-6
0.5641026	0.0103000	XQPF-12
0.5897436	0.0165000	XQPF-4
0.6153846	0.0170000	XQPF-26
0.6410257	0.0176000	XQPF-29
0.6666667	0.0240000	XQPF-31
0.6923077	0.0262000	XQPF-27
0.7179487	0.0270000	XQPF-30
0.7435898	0.0270000	XQPF-35
0.7692308	0.0292000	XQPF-9
0.7948718	0.0368000	XQPF-34
0.8205128	0.0381000	XQPF-28
0.8461539	0.0384000	XQPF-38
0.8717949	0.0432000	XQPF-7
0.8974359	0.0451000	XQPF-33
0.9230769	0.0500000	XQPF-32
0.9487180	0.0954000	XQPF-8
0.9743590	0.2085000	XQPF-23

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0002840	XQPF-3
0.0512821	0.0009029	XQPF-14
0.0769231	0.0008235	XQPF-1
0.1025641	0.0008958	XQPF-22
0.1282051	0.0013242	XQPF-16
0.1538462	0.0013351	XQPF-20
0.1794872	0.0014146	XQPF-37
0.2051282	0.0018397	XQPF-17
0.2307692	0.0018397	XQPF-18
0.2564103	0.0018913	XQPF-15
0.2820513	0.0021719	XQPF-10
0.3076923	0.0021719	XQPF-11
0.3333333	0.0022713	XQPF-5
0.3589744	0.0048265	XQPF-13
0.3846154	0.0110000	XQPF-19
0.4102564	0.0158000	XQPF-24
0.4358974	0.0161000	XQPF-21
0.4615385	0.0168000	XQPF-2
0.4871795	0.0215000	XQPF-12
0.5128205	0.0259000	XQPF-26
0.5384616	0.0268000	XQPF-29
0.5641026	0.0290000	XQPF-6
0.5897436	0.0302000	XQPF-36
0.6153846	0.0366000	XQPF-4
0.6410257	0.0387000	XQPF-25
0.6666667	0.0477000	XQPF-27
0.6923077	0.0584000	XQPF-9
0.7179487	0.0610000	XQPF-28
0.7435898	0.0636000	XQPF-34
0.7692308	0.0678000	XQPF-30
0.7948718	0.0815000	XQPF-35
0.8205128	0.0884000	XQPF-38
0.8461539	0.1068000	XQPF-31
0.8717949	0.1313000	XQPF-33
0.8974359	0.1500000	XQPF-32
0.9230769	0.1760000	XQPF-7
0.9487180	0.3390000	XQPF-8
0.9743590	5.8771262	XQPF-23

CUM PROB	CRACK DEPTH	SPECIMEN
0.0256410	0.0000000	XQPF-11
0.0512821	0.0000000	XQPF-18
0.0769231	0.0011200	XQPF-3
0.1025641	0.0052000	XQPF-14
0.1282051	0.0054200	XQPF-1
0.1538462	0.0060000	XQPF-22
0.1794872	0.0097000	XQPF-16
0.2051282	0.0098000	XQPF-20
0.2307692	0.0105000	XQPF-37
0.2564103	0.0141000	XQPF-17
0.2820513	0.0145000	XQPF-15
0.3076923	0.0167000	XQPF-10
0.3333333	0.0176000	XQPF-5
0.3589744	0.0203000	XQPF-19
0.3846154	0.0267000	XQPF-13
0.4102564	0.0324000	XQPF-21
0.4358974	0.0355000	XQPF-12
0.4615385	0.0415000	XQPF-24
0.4871795	0.0424000	XQPF-29
0.5128205	0.0426000	XQPF-26
0.5384616	0.0605000	XQPF-36
0.5641026	0.0616000	XQPF-2
0.5897436	0.0676000	XQPF-6
0.6153846	0.0751000	XQPF-4
0.6410257	0.0790000	XQPF-25
0.6666667	0.1185000	XQPF-27
0.6923077	0.1332000	XQPF-28
0.7179487	0.1669000	XQPF-9
0.7435898	0.1769000	XQPF-34
0.7692308	0.1962000	XQPF-30
0.7948718	0.2149797	XQPF-31
0.8205128	0.2530000	XQPF-35
0.8461539	0.2624000	XQPF-38
0.8717949	0.3072686	XQPF-33
0.8974359	0.3651741	XQPF-32
0.9230769	0.3881953	XQPF-7

3.2.4 XOPB

TEST SERIES: XOPB

NO.	EIFS	CUM PROB
1	0.006	0.0312
2	0.007	0.0323
3	0.009	0.0337
4	0.009	0.1200
5	0.009	0.1562
6	0.009	0.1073
7	0.009	0.2107
8	0.010	0.2309
9	0.012	0.2312
10	0.013	0.3125
11	0.014	0.3437
12	0.016	0.3750
13	0.016	0.4262
14	0.016	0.4375
15	0.016	0.4687
16	0.018	0.5000
17	0.020	0.5312
18	0.022	0.5625
19	0.024	0.5937
20	0.024	0.6250
21	0.024	0.6562
22	0.024	0.6875
23	0.027	0.7187
24	0.030	0.7500
25	0.030	0.7812
26	0.037	0.8125
27	0.037	0.8437
28	0.042	0.8750
29	0.044	0.9062
30	0.050	0.9375
31	0.053	0.9687

3.3 TASK III

3.3.1 YWPF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0344828	0.0000641	YWPF-10	0.000
0.0689655	0.0001021	YWPF-3	1086.162
0.1034483	0.0001094	YWPF-17	1058.787
0.1379310	0.0001111	YWPF-9	345.433
0.1724138	0.0001209	YWPF-15	440.500
0.2068966	0.0001260	YWPF-8	809.792
0.2413793	0.0001805	YWPF-25	796.031
0.2758621	0.0001822	YWPF-19	665.105
0.3103448	0.0001918	YWPF-12	335.297
0.3448276	0.0002111	YWPF-29	125.834
0.3793103	0.0002186	YWPF-4	380.875
0.4137931	0.0002766	YWPF-11	815.014
0.4482759	0.0003048	YWPF-23	587.113
0.4827586	0.0003332	YWPF-13	395.629
0.5172414	0.0003351	YWPF-2	1574.959
0.5517241	0.0003452	YWPF-28	680.500
0.5862069	0.0003556	YWPF-1	562.804
0.6206896	0.0003792	YWPF-7	143.961
0.6551724	0.0004364	YWPF-30	1166.764
0.6896552	0.0004389	YWPF-5	1046.370
0.7241379	0.0004525	YWPF-6	418.194
0.7586207	0.0004716	YWPF-22	1061.571
0.7931035	0.0005636	YWPF-18	101.880
0.8275862	0.0006803	YWPF-27	343.318
0.8620690	0.0007134	YWPF-26	78.657
0.8965517	0.0010235	YWPF-14	213.835
0.9310345	0.0013852	YWPF-20	911.727
0.9655172	0.0014812	YWPF-21	1057.071

CUM PROB	CRACK DEPTH	SPECIMEN
0.0344828	0.0001344	YWPF-10
0.0689655	0.0002263	YWPF-3
0.1034483	0.0002629	YWPF-17
0.1379310	0.0002689	YWPF-9
0.1724138	0.0003044	YWPF-15
0.2068966	0.0003237	YWPF-8
0.2413793	0.0005000	YWPF-19
0.2758621	0.0005327	YWPF-25
0.3103448	0.0006131	YWPF-12
0.3448276	0.0007337	YWPF-23
0.3793103	0.0008714	YWPF-4
0.4137931	0.0009403	YWPF-28
0.4482759	0.0010612	YWPF-23
0.4827586	0.0011884	YWPF-22
0.5172414	0.0012111	YWPF-1
0.5517241	0.0016000	YWPF-13
0.5862069	0.0017000	YWPF-11
0.6206896	0.0018235	YWPF-6
0.6551724	0.0021957	YWPF-7
0.6896552	0.0022621	YWPF-30
0.7241379	0.0028516	YWPF-27
0.7586207	0.0038000	YWPF-2
0.7931035	0.0045949	YWPF-18
0.8275862	0.0049000	YWPF-5
0.8620690	0.0062000	YWPF-14
0.8965517	0.0075451	YWPF-26
0.9310345	0.0148000	YWPF-21
0.9655172	0.0171000	YWPF-20

CUM PROB	CRACK DEPTH	SPECIMEN
0.0344828	0.0003571	YWPF-10
0.0689655	0.0008209	YWPF-3
0.1034483	0.0010428	YWPF-17
0.1379310	0.0010808	YWPF-9
0.1724138	0.0013125	YWPF-15
0.2068966	0.0019000	YWPF-8
0.2413793	0.0020170	YWPF-19
0.2758621	0.0036638	YWPF-12
0.3103448	0.0043000	YWPF-29
0.3448276	0.0052000	YWPF-25
0.3793103	0.0060000	YWPF-4
0.4137931	0.0064210	YWPF-28
0.4482759	0.0095000	YWPF-11
0.4827586	0.0108000	YWPF-2
0.5172414	0.0130000	YWPF-13
0.5517241	0.0135000	YWPF-23
0.5862069	0.0153000	YWPF-7
0.6206896	0.0160000	YWPF-1
0.6551724	0.0174000	YWPF-5
0.6896552	0.0183000	YWPF-6
0.7241379	0.0214000	YWPF-30
0.7586207	0.0257000	YWPF-18
0.7931035	0.0344000	YWPF-27
0.8275862	0.0350000	YWPF-26
0.8620690	0.0414000	YWPF-22
0.8965517	0.0426000	YWPF-20
0.9310345	0.0500000	YWPF-14
0.9655172	0.0800000	YWPF-21

CUM PROB	CRACK DEPTH	SPECIMEN
0.0344828	0.0016775	YWPF-10
0.0689655	0.0079000	YWPF-3
0.1034483	0.0081000	YWPF-9
0.1379310	0.0098000	YWPF-8
0.1724138	0.0107000	YWPF-17
0.2068966	0.0121000	YWPF-15
0.2413793	0.0211000	YWPF-25
0.2758621	0.0284000	YWPF-19
0.3103448	0.0302000	YWPF-4
0.3448276	0.0313000	YWPF-2
0.3793103	0.0330000	YWPF-12
0.4137931	0.0348147	YWPF-29
0.4482759	0.0356000	YWPF-11
0.4827586	0.0450000	YWPF-23
0.5172414	0.0488000	YWPF-28
0.5517241	0.0493000	YWPF-5
0.5862069	0.0500000	YWPF-13
0.6206896	0.0513000	YWPF-1
0.6551724	0.0514000	YWPF-22
0.6896552	0.0627000	YWPF-6
0.7241379	0.0690000	YWPF-7
0.7586207	0.0832000	YWPF-20
0.7931035	0.0847000	YWPF-27
0.8275862	0.0895970	YWPF-30
0.8620690	0.1125000	YWPF-18
0.8965517	0.1370000	YWPF-14
0.9310345	0.1523000	YWPF-26
0.9655172	0.2784000	YWPF-21

CUM PROB	CRACK DEPTH	SPECIMEN
0.0344828	0.0129000	YWPF-10
0.0689655	0.0248000	YWPF-17
0.1034483	0.0268000	YWPF-3
0.1379310	0.0373000	YWPF-9
0.1724138	0.0395000	YWPF-15
0.2068966	0.0434000	YWPF-8
0.2413793	0.0620000	YWPF-19
0.2758621	0.0690000	YWPF-25
0.3103448	0.0749000	YWPF-11
0.3448276	0.0817000	YWPF-2
0.3793103	0.0869000	YWPF-28
0.4137931	0.0957000	YWPF-22
0.4482759	0.0978000	YWPF-5
0.4827586	0.1029000	YWPF-12
0.5172414	0.1243000	YWPF-4
0.5517241	0.1247013	YWPF-29
0.5862069	0.1290000	YWPF-1
0.6206896	0.1345000	YWPF-13
0.6551724	0.1400000	YWPF-23
0.6896552	0.1595000	YWPF-6
0.7241379	0.1727292	YWPF-30
0.7586207	0.2092000	YWPF-27
0.7931035	0.2383067	YWPF-20
0.8275862	0.2756000	YWPF-7
0.8620690	0.3063847	YWPF-26
0.8965517	0.3258000	YWPF-18
0.9310345	0.4701000	YWPF-14
0.9655172	0.7919205	YWPF-21

3.3.2 YWPB

TEST SERIES: YWPB

NO.	EIFS	CUM PROB
1	0.010	0.0323
2	0.012	0.0545
3	0.013	0.0658
4	0.014	0.1203
5	0.015	0.1613
6	0.016	0.1903
7	0.021	0.2203
8	0.022	0.2531
9	0.023	0.2903
10	0.026	0.3225
11	0.026	0.3548
12	0.030	0.3371
13	0.030	0.4194
14	0.035	0.4516
15	0.035	0.4839
16	0.037	0.5161
17	0.040	0.5484
18	0.043	0.5806
19	0.044	0.6129
20	0.044	0.6452
21	0.046	0.6774
22	0.073	0.7097
23	0.091	0.7419
24	0.094	0.7742
25	0.100	0.8065
26	0.145	0.8387
27	0.150	0.8710
28	0.220	0.9032
29	0.230	0.9355
30	0.300	0.9677

3.3.3 HYWPF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0909091	0.0002776	HYWPF-7	58.382
0.1818182	0.0004102	HYWPF-9	404.940
0.2727273	0.0004155	HYWPF-4	204.962
0.3636364	0.0006333	HYWPF-10	217.747
0.4545455	0.0007356	HYWPF-1	98.852
0.5454546	0.0008912	HYWPF-2	137.480
0.6363636	0.0008924	HYWPF-5	735.564
0.7272727	0.0011827	HYWPF-8	321.842
0.8181818	0.0012850	HYWPF-3	56.575
0.9090909	0.0013067	HYWPF-6	134.937

CUM. PROB	CRACK DEPTH	SPECIMEN
0.0909091	0.0068000	HYWPF-7
0.1818182	0.0121400	HYWPF-9
0.2727273	0.0168000	HYWPF-4
0.3636364	0.0306000	HYWPF-5
0.4545455	0.0422000	HYWPF-1
0.5454546	0.0494000	HYWPF-10
0.6363636	0.0694000	HYWPF-6
0.7272727	0.0696000	HYWPF-3
0.8181818	0.0713000	HYWPF-8
0.9090909	0.0729000	HYWPF-2

3.3.4 HYWPB

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0909091	0.0000363	HYWPB-5	163.751
0.1818182	0.0000676	HYWPB-7	80.830
0.2727273	0.0000892	HYWPB-2	109.463
0.3636364	0.0001140	HYWPB-6	82.010
0.4545455	0.0001695	HYWPB-8	55.333
0.5454546	0.0001802	HYWPB-3	126.636
0.6363636	0.0001871	HYWPB-9	62.461
0.7272727	0.0002208	HYWPB-10	83.226
0.8181818	0.0003480	HYWPB-4	74.405
0.9090909	0.0005224	HYWPB-1	33.036

3.3.5 LYWPF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0909091	0.0000866	LYWPF-10	0.000
0.1818182	0.0001125	LYWPF-6	0.000
0.2727273	0.0001270	LYWPF-4	0.000
0.3636364	0.0002824	LYWPF-1	2649.312
0.4545455	0.0002907	LYWPF-3	690.435
0.5454546	0.0003608	LYWPF-8	365.281
0.6363636	0.0004273	LYWPF-7	872.282
0.7272727	0.0004535	LYWPF-2	214.871
0.8181818	0.0007343	LYWPF-9	350.607
0.9090909	0.0019168	LYWPF-5	851.030

CUM PROB	CRACK DEPTH	SPECIMEN
0.0909091	0.0001109	LYWPF-10
0.1818182	0.0001801	LYWPF-6
0.2727273	0.0002099	LYWPF-4
0.3636364	0.0005305	LYWPF-3
0.4545455	0.0007004	LYWPF-8
0.5454546	0.0008422	LYWPF-7
0.6363636	0.0009276	LYWPF-2
0.7272727	0.0010400	LYWPF-1
0.8181818	0.0016905	LYWPF-9
0.9090909	0.0054944	LYWPF-5

CUM PROB	CRACK DEPTH	SPECIMEN
0.0909091	0.0001768	LYWPF-10
0.1818182	0.0003148	LYWPF-6
0.2727273	0.0003741	LYWPF-4
0.3636364	0.0006700	LYWPF-3
0.4545455	0.0015852	LYWPF-8
0.5454546	0.0018800	LYWPF-1
0.6363636	0.0019618	LYWPF-7
0.7272727	0.0022861	LYWPF-2
0.8181818	0.0042200	LYWPF-9
0.9090909	0.0116000	LYWPF-5

CUM PROB	CRACK DEPTH	SPECIMEN
0.0909091	0.0003082	LYWPF-10
0.1818182	0.0005971	LYWPF-6
0.2727273	0.0007337	LYWPF-4
0.3636364	0.0028500	LYWPF-3
0.4545455	0.0033900	LYWPF-1
0.5454546	0.0052200	LYWPF-8
0.6363636	0.0052800	LYWPF-2
0.7272727	0.0054562	LYWPF-7
0.8181818	0.0132000	LYWPF-9
0.9090909	0.0537000	LYWPF-5

CUM PROB	CRACK DEPTH	SPECIMEN
0.0909091	0.0005826	LYWPF-10
0.1818182	0.0013015	LYWPF-6
0.2727273	0.0016800	LYWPF-4
0.3636364	0.0062000	LYWPF-1
0.4545455	0.0100000	LYWPF-3
0.5454546	0.0124000	LYWPF-8
0.6363636	0.0175400	LYWPF-7
0.7272727	0.0193500	LYWPF-2
0.8181818	0.0391000	LYWPF-9
0.9090909	0.1840000	LYWPF-5

3.3.6 LYWPB

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0909091	0.0000118	LYWPB-4	76.562
0.1818182	0.0000153	LYWPB-10	128.425
0.2727273	0.0000169	LYWPB-7	152.924
0.3636364	0.0000170	LYWPB-9	180.602
0.4545455	0.0000896	LYWPB-3	217.565
0.5454546	0.0001397	LYWPB-5	59.970
0.6363636	0.0001505	LYWPB-8	59.091
0.7272727	0.0003569	LYWPB-1	45.957
0.8181818	0.0006049	LYWPB-6	132.283
0.9090909	0.0006465	LYWPB-2	211.609

3.3.7 XWIF

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0714286	0.0001358	XWIF-7	1753.164
0.1428571	0.0001654	XWIF-2	1828.638
0.2142857	0.0003026	XWIF-6	0.000
0.2857143	0.0004181	XWIF-11	1100.410
0.3571429	0.0007005	XWIF-13	100.250
0.4285714	0.0007504	XWIF-3	405.236
0.5000000	0.0009624	XWIF-12	249.132
0.5714286	0.0011119	XWIF-9	81.076
0.6428571	0.0011418	XWIF-1	645.496
0.7142857	0.0012981	XWIF-8	365.895
0.7857143	0.0015975	XWIF-4	207.834
0.8571429	0.0017557	XWIF-10	350.869
0.9285714	0.0019326	XWIF-5	0.000

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0003630	XWIF-7
0.1428571	0.0012000	XWIF-2
0.2142857	0.0013006	XWIF-6
0.2857143	0.0036516	XWIF-1
0.3571429	0.0043000	XWIF-11
0.4285714	0.0056000	XWIF-3
0.5000000	0.0072389	XWIF-8
0.5714286	0.0089897	XWIF-12
0.6428571	0.0106522	XWIF-13
0.7142857	0.0108806	XWIF-4
0.7857143	0.0111923	XWIF-5
0.8571429	0.0149763	XWIF-9
0.9285714	0.0160000	XWIF-10

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0030000	XWIF-7
0.1428571	0.0042000	XWIF-2
0.2142857	0.0095000	XWIF-6
0.2857143	0.0151000	XWIF-11
0.3571429	0.0310000	XWIF-3
0.4285714	0.0340000	XWIF-13
0.5000000	0.0416000	XWIF-12
0.5714286	0.0417000	XWIF-1
0.6428571	0.0499000	XWIF-8
0.7142857	0.0508000	XWIF-9
0.7857143	0.0560000	XWIF-10
0.8571429	0.0580000	XWIF-4
0.9285714	0.0640000	XWIF-5

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0098000	XWIF-7
0.1428571	0.0111000	XWIF-2
0.2142857	0.0477000	XWIF-11
0.2857143	0.0609210	XWIF-6
0.3571429	0.0869000	XWIF-1
0.4285714	0.0980000	XWIF-3
0.5000000	0.1212000	XWIF-8
0.5714286	0.1464000	XWIF-10
0.6428571	0.1530000	XWIF-4
0.7142857	0.1550000	XWIF-5
0.7857143	0.1670000	XWIF-12
0.8571429	0.2173000	XWIF-13
0.9285714	0.2738000	XWIF-9

CUM PROB	CRACK DEPTH	SPECIMEN
0.0714286	0.0169000	XWIF-7
0.1428571	0.0337000	XWIF-2
0.2142857	0.1516410	XWIF-6
0.2857143	0.1728000	XWIF-1
0.3571429	0.2095000	XWIF-11
0.4285714	0.2237180	XWIF-3
0.5000000	0.2954744	XWIF-8
0.5714286	0.3641747	XWIF-12
0.6428571	0.4462694	XWIF-10
0.7142857	0.4471169	XWIF-13
0.7857143	0.4602506	XWIF-4
0.8571429	0.4786556	XWIF-5
0.9285714	0.7774742	XWIF-9

3.4 TASK IV
3.4.1 Steel-
AF1410

EIFS FOR AF1410 STEEL NO-LOAD
TRANSFER SPECIMENS

<u>SPECIMEN NO</u>	<u>EIFS (IN)</u>
ST-1	.40 x 10 ⁻⁶
2	.38 x 10 ⁻⁶
3	.17 x 10 ⁻⁶
4	.20 x 10 ⁻⁷
5	.10 x 10 ⁻⁷
6	.13 x 10 ⁻⁷
7	.12 x 10 ⁻⁸
8	.38 x 10 ⁻⁸
9	.56 x 10 ⁻⁸
10	.38 x 10 ⁻⁸
11	.10 x 10 ⁻⁷
12	.40 x 10 ⁻⁷
13	.25 x 10 ⁻⁷
14	.12 x 10 ⁻⁸
15	.56 x 10 ⁻⁸
16	-
17	.32 x 10 ⁻⁷
18	-
19	.12 x 10 ⁻⁷
20	.12 x 10 ⁻⁸
21	.82 x 10 ⁻⁷
22	.10 x 10 ⁻⁷
23	-
24	-
25	-
26	.13 x 10 ⁻⁷
27	.20 x 10 ⁻⁷
28	.10 x 10 ⁻⁷
29	.10 x 10 ⁻⁷
30	.19 x 10 ⁻⁷

3.4.2 Tita-
nium -
6AL-4V

EIFS FOR Ti6Al-4V NO-LOAD TRANSFER SPECIMENS

<u>SPECIMEN NO.</u>	<u>EIFS (IN.)</u>
TXPF-1	.00190
-2	.00082
-3	.00067
-4	.00222
-5	.00067
-6	.00113
-7	.00110
-8	.00135
-9	.00066
-10	.00121
-11	.00090
-12	.00157
-13	.00189
-14	.00063
-15	.00081
 TYPF-1	
-2	.00312
-3	
-4	.00106
-5	.00083
-6	.00145
-7	.00165
-8	.00103
-9	.00090
-10	.00157
-11	.00151
-12	.00110
-13	.00164
-14	.00084
-15	.00108

3.5 TASK V
3.5.1 Cold
Worked Holes

EIFS FOR COLD-WORKED SPECIMENS

CUM PROB	EIFS	SPECIMEN	STANDARD DEVIATION
0.0322581	0.0003	CWF-19	0.000
0.0645161	0.0003	CWF-4	0.000
0.0967742	0.0003055	CWF-28	0.000
0.1290323	0.0009054	CWF-3	0.000
0.1612903	0.0009054	CWF-26	0.000
0.1935484	0.0039790	CWF-7	0.000
0.2258064	0.0039790	CWF-12	0.000
0.2580645	0.0039790	CWF-13	0.000
0.2903226	0.0039790	CWF-14	0.000
0.3225806	0.0039790	CWF-25	0.000
0.3548387	0.0039790	CWF-30	0.000
0.3870968	0.0045941	CWF-8	0.000
0.4193548	0.0045941	CWF-16	0.000
0.4516129	0.0045941	CWF-23	0.000
0.4838710	0.0052710	CWF-11	0.000
0.5161290	0.0052710	CWF-18	0.000
0.5483871	0.0052710	CWF-20	0.000
0.5806451	0.0058096	CWF-10	0.000
0.6129032	0.0058096	CWF-27	0.000
0.6451613	0.0069514	CWF-22	0.000
0.6774194	0.0079435	CWF-6	0.000
0.7096774	0.0079435	CWF-21	0.000
0.7419355	0.0079435	CWF-29	0.000
0.7741935	0.0087807	CWF-2	0.000
0.8064516	0.0104765	CWF-9	0.000
0.8387097	0.0104765	CWF-15	0.000
0.8709677	0.0109171	CWF-17	0.000
0.9032258	0.0128480	CWF-5	0.000
0.9354839	0.0137170	CWF-24	0.000
0.9677419	0.0140963	CWF-1	0.000

APPENDIX A

IMPROVED DRILLING AND ASSEMBLY

VWPF Series

The VWPF Series represented the Improved Drilling and Assembly Procedures described in Volume I. These specimens were prepared using proper techniques and were tested for two equivalent lives of the F-16 fighter spectra at 34KSI gross section stress. The following listings are final crack depths at the end of the two lives in ascending order. Crack depth values at one life and EIFS values plotted in Volume I were both computer generated.

1	0.001 inches	13	0.012 inches	25	0.0287 inches
2	0.001 "	14	0.0122 "	26	0.0301 "
3	0.0012 "	15	0.0124 "	27	0.0330 "
4	0.0013 "	16	0.0134 "	28	0.0396 "
5	0.0015 "	17	0.0147 "	29	0.0415 "
6	0.0059 "	18	0.0176 "	30	0.0424 "
7	0.006 "	19	0.0185 "	31	0.0502 "
8	0.0081 "	20	0.0197 "	32	0.0677 "
9	0.00941 "	21	0.0214 "	33	0.0689 "
10	0.0097 "	22	0.0215 "	34	0.0706 "
11	0.010 "	23	0.0216 "	35	0.0755 "
12	0.011 "	24	0.0250 "	36	0.1338 "